



SAN TOMAS AQUINO/SARATOGA CREEK TRAIL MASTER PLAN

JUNE 29, 1999

PREPARED BY:
SOKALE/LANDRY COLLABORATIVE

FOR:
**COUNTY OF SANTA CLARA
PARKS AND RECREATION DEPARTMENT**
IN CONJUNCTION WITH THE
**SAN TOMAS AQUINO/SARATOGA
CREEK STREAMSIDE PARK COMMITTEE**



This Master Plan report provides a detailed discussion of the San Tomas Aquino/Saratoga Creek Trail including the specific location of the 12.28-mile alignment and the associated spur trails, staging areas and access points. The locations and conceptual engineering solutions for the underpasses, tunnels and pedestrian bridges are described. Many of these underpasses, which cross beneath roadways to provide a grade-separated trail, are subject to temporary flooding during storm events. Design guidelines are included to assist the cities with the implementation of the trail.

This report builds upon the 1996 San Tomas Aquino/Saratoga Creek Trail Feasibility Report prepared by Sokale/Landry Collaborative which evaluated the two creek corridors to determine the feasibility of constructing a streamside trail for pedestrians and bicyclists and enhancing the adjacent habitat for wildlife. The 1996 Feasibility Report and this Master Plan were developed in coordination with the Streamside Park Committee, established by the County of Santa Clara Board of Supervisors, and with County Parks and Recreation staff support.

The Master Plan was developed in concert with an Expanded Initial Study and Mitigated Negative Declaration. These environmental documents were prepared by Thomas Reid Associates under the guidelines of the California Environmental Quality Act (CEQA). Upon completion of the environmental review process, the Master Plan and associated environmental documents will be adopted by the Board of Supervisors and forwarded to those cities responsible for constructing and maintaining the trail. The cities of

Santa Clara, San Jose and Cupertino should adopt the Master Plan and associated Mitigated Negative Declaration as the first step toward building the trail. These documents will assist the cities in securing development agreements, requiring appropriate land uses and landscaping adjacent to the creeks and in obtaining grant funds to assist with trail construction.

The trail extends from the San Francisco Bay Trail, near Highway 237, to Prospect Road in San Jose. The alignment parallels San Tomas Aquino Creek from Highway 237 to Monroe Street in the City of Santa Clara. It then follows roadways in the cities of Santa Clara, Cupertino and San Jose before rejoining the creek corridor. At Barnhart Avenue, the trail returns to the corridor and follows Saratoga Creek to Murdock Park in the City of San Jose. The final stretch of the trail extends a short distance on city streets from Murdock Park to Prospect Road.

The trail alignment is divided into six reaches or trail segments to facilitate development. The reaches vary in length and in the complexity required to engineer trail related underpasses and bridges. The reaches begin and end at points that provide logical connections to the existing pedestrian and bicycle circulation system. The six reaches include:

- Reach 1 – Highway 237 to Agnew Road
- Reach 2 – Agnew Road to Scott Boulevard
- Reach 3 – Scott Boulevard to Monroe Street
- Reach 4 – Monroe Street to Pruneridge Avenue
- Reach 5 – Pruneridge Avenue to Bollinger Road
- Reach 6 – Bollinger Road to Prospect Road



EXECUTIVE SUMMARY

The trail alignment also includes spur trails, staging areas and access points. Spur trails are routes that provide connections to the public transportation system and points of interest located a short distance from the trail. Staging areas provide parking and trail amenities. Access points are entries/exits along the trail that provide direct connections to neighborhoods, businesses, educational facilities, recreational centers and the on-street bicycle and pedestrian system.

Four types of trails are identified in the Master Plan. A large majority of the trail is located adjacent to the creek on a pathway separated from motor vehicle traffic. This first trail type is designated as a Class I - Bicycle Pathway by the California Department of Transportation (Caltrans). The second and third types of trails share the roads with vehicles and are called Class II - Bicycle Lanes and Class III - Bicycle Routes. The fourth trail type is a Soft Surface Pedestrian Only trail. It offers a natural or gravel surface on those spur trails which extend through habitat areas. The mileage for each of these trail types is:

Trail Alignment	Mileage
Class I - Bicycle Pathway	5.19
Class II - Bicycle Lane	2.29
Class III - Bicycle Route	<u>4.80</u>
Total Trail Distance	12.28
Spur Trails	
Proposed	
Class III - Bicycle Route	1.19
Soft Surface Pedestrian Only	1.54
Existing	<u>11.29</u>
Total Spur Trail Distance	14.02

Finally, the Master Plan report includes design guidelines intended to establish minimum trail development requirements and offer design recommendations that will establish a consistent character for the trail as it is developed by multiple agencies. The design guidelines also offer recommendations for public and private developments located directly adjacent to the creeks. These recommendations are intended to strengthen the integrity of the riparian corridor and improve the aesthetic quality of the trail through appropriate land use and landscaping. This Master Plan report consists of five chapters. An introductory page precedes each chapter and describes the specific content.

Chapter 1 - Trail Overview provides an introduction to the study area, outlines the Streamside Park Committee's goals and reviews the history of the planning process.

Chapter 2 - Significance and Benefits highlights the importance of the trail to the community.

Chapter 3 - Trail Plan describes the trail features and details the trail alignment including access points, staging areas and spur trails. Projects proposed by other agencies that impact the trail corridor are reviewed.

Chapter 4 - Design Guidelines provides a discussion and sample cross-sections and diagrams of the trail types, staging areas, access points, site amenities and habitat enhancements.

Chapter 5 - Development Challenge provides construction budget estimates for all major structures, trail surfacing, mitigation and amenities to arrive at a total cost of development. Required land acquisitions and easements are identified. Permits and approvals necessary for construction are listed.



SAN TOMAS AQUINO/SARATOGA CREEK TRAIL MASTER PLAN

JUNE 29, 1999

PREPARED BY:
SOKALE/LANDRY COLLABORATIVE

FOR:
COUNTY OF SANTA CLARA
PARKS AND RECREATION DEPARTMENT
IN CONJUNCTION WITH THE
SAN TOMAS AQUINO/SARATOGA
CREEK STREAMSIDE PARK COMMITTEE



CONSULTANTS AND AGENCY STAFF

LEAD CONSULTANT

Sokale/Landry Collaborative

Landscape Architecture/Environmental Planning
San Jose, California

Susan Landry-Lindskog, ASLA
Principal Landscape Architect

Jana Sokale
Principal Environmental Planner

SUBCONSULTANTS

Cotton, Shires and Associates

Geotechnical Engineers
Los Gatos, California

Lynne Trulio, Ph.D.

Wetlands and Wildlife Ecologist
Mountain View, California

Wilbur Smith Associates

Transportation Planners
San Francisco, California

ENVIRONMENTAL CONSULTANT

Thomas Reid Associates

Environmental Consultants
Palo Alto, California

BOARD OF SUPERVISORS AND STAFF

James T. Beall, Jr., County Supervisor - District 4
Sean Charpentier, Board Aide - District 4
Metta Cuffel, Board Aide - District 4
Sequoia Hall, Board Aide - District 4

CITY OF SANTA CLARA STAFF

Chris Fernandez, P.E., Traffic Engineer
Nick Lozano, Traffic Engineer
Kevin Riley, A.I.C.P., Principal Planner
Larry Wolfe, Parks and Recreation Director
Rich Yee, Civil Engineer II

CITY OF SAN JOSE STAFF

Jo-Ann Collins, City Bicycle Coordinator
Carla Ruigh, Parks Manager
Joel Slavit, Planner 2

CITY OF CUPERTINO STAFF

Raymond Chong, Traffic Engineer
Stephen Dowling, Parks and Recreation Director

SANTA CLARA VALLEY WATER DISTRICT

Scott Katric, Associate Civil Engineer
Sue Tippets, P.E., Supervising Engineer

TABLE OF CONTENTS



ACKNOWLEDGEMENTS i

CHAPTER 1 - TRAIL OVERVIEW 1

Regional Setting	2
Trail Planning Process	3
Mission and Goals	5
Methodology	6
Implementation	8

CHAPTER 2 - SIGNIFICANCE

AND BENEFITS OF THE TRAIL..... 9

Inclusion in Regional Plans	10
Recreation Benefits	10
Connections to Regional Trails and Parks	
Connections to City Parks, Recreation	
Facilities and Attractions	
Transportation Benefits	11
Connections to Businesses	
Connections to Rail Lines	
Connections to Buses	
Connections to Schools	
Environmental Benefits	13
Enhancement of Natural Resources	
Improved Air Quality	

CHAPTER 3 - TRAIL PLAN 15

Features of the Trail	16
How to Use the Reach Maps and Legend	17
Reach 1 - Highway 237 to Agnew Road	18
Points of Interest	
Trail Alignment	
Engineered Structures	
Access Points	
Staging Areas	
Spur Trails	

Reach 2 - Agnew Road to Scott Boulevard 26

Points of Interest
Trail Alignment
Engineered Structures
Spur Trails

Reach 3 - Scott Boulevard to Monroe Street 30

Points of Interest
Trail Alignment
Engineered Structures
Access Points
Staging Areas
Spur Trails

Reach 4 - Monroe Street to Pruneridge Avenue 36

Points of Interest
Trail Alignment
Access Points
Staging Areas
Spur Trails

Reach 5 - Pruneridge Avenue to Bollinger Road 42

Points of Interest
Trail Alignment
Engineered Structures
Access Points
Spur Trails

Reach 6 - Bollinger Road to Prospect Road 48

Points of Interest
Trail Alignment
Access Points
Staging Areas
Spur Trails



TABLE OF CONTENTS

CHAPTER 4 - DESIGN GUIDELINES 53

Purpose of the Guidelines	54
Design Concepts	54
Class I - Bicycle Pathway	
Design Recommendations	56
1.1 Trail Corridor	56
1.2 Paving Type and Design	62
1.3 Engineered Structures	67
1.4 Habitat Enhancements	70
1.5 Site Amenities	70
1.6 Security and Safety	71
1.7 Maintenance	71
Class II - Bicycle Lane and	
Class III - Bicycle Route	
Design Recommendations	71
2.1 Trail Corridor	72
2.2 Paving Type and Design	72
2.3 Street Crossings	72
2.4 Site Amenities	75
Pedestrian Only Soft Surface Trail	
Design Recommendations	77
3.1 Trail Corridor	77
3.2 Paving Type and Design	77
Staging Areas	77
Design Recommendations	
Access Points	
Design Recommendations	78
Site Amenities	
Design Recommendations	78

Habitat Enhancements	81
Existing Habitats	81
7.1 Reaches 1, 2, 3 and	
Monroe Staging Area - Class I	83
7.2 Reaches 4, 5 and 6 - Class II and Class III ..	86
7.3 Reaches 5 and 6 - Class I	87
7.4 Private and Public Developments	87

CHAPTER 5 - DEVELOPMENT CHALLENGE

Design and Construction Costs	93
Reach 1 - Construction Budget Estimate	
Reach 2 - Construction Budget Estimate	
Reach 3 - Construction Budget Estimate	
Reach 4 - Construction Budget Estimate	
Reach 5 - Construction Budget Estimate	
Reach 6 - Construction Budget Estimate	
Land Acquisition	100
Permits and Approvals	104

BIBLIOGRAPHY 109

APPENDICES

Appendix 1 - Board Resolution	111
Appendix 2 - Agencies Contacted	113

LIST OF MAPS, ILLUSTRATIONS AND FIGURES



MAPS

Map 1	Regional Setting Map	2
Map 2	Master Plan Map (Located in Pocket)	
Map 3	Reach 1 - Highway 237 to Agnew Road	19
Map 4	Reach 2 - Agnew Road to Scott Blvd.	27
Map 5	Reach 3 - Scott Blvd. to Monroe Street	31
Map 6	Reach 4 - Monroe Street to Pruneridge Ave.	37
Map 7	Reach 5 - Pruneridge Ave. to Bollinger Road	43
Map 8	Reach 6 - Bollinger Road to Prospect Road	49
Map 9	Trail at Monroe Staging Area	117
Map 10	Hewlett-Packard Spur Trail	118
Map 11	San Jose Water Co. and County Roads Parcels	119
Map 12	Map of Murdock Park	120
Map 13	Map of English Drive Spur Trail	121

ILLUSTRATIONS

Illustration 1	Trail Crossing beneath CalTrain	12
Illustration 2	Murdock Pedestrian Bridge	51

FIGURES

Figure 1	Summary of Trail Connections	3
Figure 2	Mission Statement and Trail Goals	4
Figure 3	Feasibility Study Goals	5
Figure 4	Master Plan Goals	6
Figure 5	Points of Interest along Reach 1	18
Figure 6	Reach 1 Trail Improvements	21
Figure 7	Conceptual Engineering Design of Highway 237, Great America and Tasman Drive Underpasses	22

Figure 8	Conceptual Engineering Design of Old Mountain View-Alviso Road Underpass with Flood Wall	24
Figure 9	Agnew Road Intersection Improvements	25
Figure 10	Points of Interest along Reach 2	26
Figure 11	Summary of Reach 2 Trail Improvements	28
Figure 12	Conceptual Engineering Design of Mission College Blvd., Highway 101 and Scott Blvd. Underpasses	29
Figure 13	Points of Interest along Reach 3	30
Figure 14	Summary of Reach 3 Trail Improvements	32
Figure 15	Grade-Separated Crossing Options at CalTrain	33
Figure 16	Conceptual Engineering Design of the Monroe Street Tunnel	34
Figure 17	Monroe Street Staging Area Design Concept	35
Figure 18	Points of Interest along Reach 4	36
Figure 19	Summary of Reach 4 Trail Improvements	38
Figure 20	Conceptual Design Solution to the Class I Bikeway adjacent to San Tomas Expwy.	39
Figure 21	Points of Interest along Reach 5	42
Figure 22	Summary of Reach 5 Trail Improvements	44
Figure 23	Trail Alignment through County Roads and Airports Department property adjacent to Lawrence Expressway	46
Figure 24	Points of Interest along Reach 6	48
Figure 25	Summary of Reach 6 Trail Improvements	50
Figure 26	Class I Trail - Major Components of a Trail Section	57
Figure 27	Class I Trail - Raised Levee, Optimum Condition	58



LIST OF MAPS, ILLUSTRATIONS AND FIGURES

Figure 28	Class I Trail - Existing Constricted Levee Option A: Reduce Trail Width	59	Figure 45	Reach 4 - Monroe Street to Pruneridge Avenue Construction Budget Estimate	97
Figure 29	Class I Trail - Existing Constricted Levee Option B: Widen Levee	60	Figure 46	Reach 5 - Pruneridge Avenue to Bollinger Road Construction Budget Estimate	98
Figure 30	Class I Trail - Existing Constricted Levee Option C: Widen Levee to meet Adjacent Grade	61	Figure 47	Reach 6 - Bollinger Road to Prospect Road Construction Budget Estimate	100
Figure 31	Class I Trail - Original Top of Bank Commercial/R&D Areas	63			
Figure 32	Class I Trail - Original Top of Bank Residential Areas	64			
Figure 33	Class I Trail - Original Top of Bank Option A: Constrained Areas	65			
Figure 34	Class I Trail - Original Top of Bank Option B: Open Areas	66			
Figure 35	Class I Trail - At-Grade Street Crossing	69			
Figure 36	Class II Facilities - Bike Lanes & Sidewalk	73			
Figure 37	Class III Facilities - Bike Routes & Sidewalk	74			
Figure 38	Class II or III - At-Grade Street Crossing	76			
Figure 39	Pedestrian Only Soft Surface - Original Top of Bank	79			
Figure 40	Staging Area	81			
Figure 41	Summary of Budget Estimates	93			
Figure 42	Reach 1 - Highway 237 to Agnew Road Construction Budget Estimate	94			
Figure 43	Reach 2 - Agnew Road to Scott Boulevard Construction Budget Estimate	95			
Figure 44	Reach 3 - Scott Boulevard to Monroe Street Construction Budget Estimate	96			

ACKNOWLEDGEMENTS



Thanks to all who have participated in the preparation of this Master Plan. The Master Plan was completed under the direction of the San Tomas Aquino/Saratoga Creek Streamside Park Committee. Master Plan funding and staff to the Streamside Park Committee were provided by the County of Santa Clara Department of Parks and Recreation. The cities of Santa Clara, San Jose and Cupertino and the Santa Clara Valley Water District contributed staff review throughout all phases of the project.

Special thanks to former County Supervisor Rod Diridon Sr. who initiated the Board Resolution to create the Streamside Park Committee. Thanks to the Santa Clara Educational and Nature Trail Committee cofounded by Lori Garcia and Kevin Moore with Santa Clara residents Frederick Clegg, Donald Shrank, Amy Black and all others who championed creation of this creek trail. Thanks to members of the community whose comments helped to shape this Master Plan and associated environmental documents. We look forward to the time when the trail is completed and enjoyed by the community.

SAN TOMAS AQUINO/SARATOGA STREAMSIDE PARK COMMITTEE MEMBERS

John Gibbs, Chair, Board of Supervisors, District 1

Kevin Moore, Past Chair, City of Santa Clara

David Abramson, 3COM

Bob Levy, City of San Jose

Rich Anderson❖, Santa Clara Valley Water District

Jamie Matthews❖, Board of Supervisors, District 2

Garnetta Annabelle❖, County Trail Advisory Committee

Edward Ortega, City of Santa Clara

Rod Diridon, Jr.❖, City of Santa Clara

Bryan Osborn❖, Santa Clara Unified School District

Lorie Garcia, Board of Supervisors, District 4

Skip Przyborowski, Santa Clara Unified School District

Jack Going, Santa Clara Visitors and Convention Bureau

Ted Roberts, Rancho Rinconada Recreation and Park District

Eric Jensen, Board of Supervisors, District 3

Susan Saso❖, City of Santa Clara

Scott Katric, Santa Clara Valley Water District

Jim Stallman, Board of Supervisors, District 5

Mark Klemencic❖, Santa Clara Valley Water District

Dick Wentz, Westwood Oaks Neighborhood Association

Sue Lasher, City of Santa Clara

❖ Denotes Past Member

COUNTY OF SANTA CLARA PARKS AND RECREATION DEPARTMENT STAFF

Ruth Shriber, Project Manager and Staff to the Streamside Park Committee

Alan LaFleur, Deputy Director

Lisa Killough, Regional Park Planner



ACKNOWLEDGEMENTS

SANTA CLARA COUNTY BOARD OF SUPERVISORS

Pete McHugh, Chair, District 3
Blanca Alvarado, District 2
James T. Beall, Jr., District 4
Don Gage, District 1
S. Joseph Simitian, District 5

SANTA CLARA COUNTY PARKS AND RECREATION COMMISSION

Larry Ames
Jim Foran
Bob Levy
Claude (Tony) Look
John Redding
Marcine Seid
Lynge Simoni

SANTA CLARA VALLEY WATER DISTRICT BOARD OF DIRECTORS

Tony Estremera, At Large (North County)
Robert Gross, District 3
Joe Judge, District 2
Rosemary Kamei, District 1
Sig Sanchez, At Large (South County)
Larry Wilson, District 4
Greg Zlotnick, District 5

CITY OF SANTA CLARA CITY COUNCIL

Judy Nadler, Mayor
Rod Diridon, Jr.
Lisa Gillmor
Patricia Mahan
Jamie Matthews
John L. McLemore
Aldyth Parle

CITY OF SAN JOSE CITY COUNCIL

Ron Gonzales, Mayor
Cindy Chavez, District 3
Pat Dando, District 10
Manny Diaz, District 5
John Diquisto, District 9
Frank Fiscalini, District 6
Linda Le Zotte, District 1
Margie Matthews, District 4
Charlotte Powers, District 2
George Shirakawa, Jr., District 7
Alice Woody, District 8

CITY OF CUPERTINO CITY COUNCIL

Wally Dean, Mayor
Don Burnett
Michael S. Chang, Ph.D.
Sandra James
John Statton

CHAPTER 1 TRAIL OVERVIEW

San Tomas Aquino / Saratoga Creek Trail Master Plan 1999





Chapter 1 provides an overview of the regional setting, details the planning process, discusses the mission and goals, reviews the methodology and highlights the steps needed to implement the trail plan. The study area reviewed in this Master Plan extends from just north of Highway 237 at the proposed trail connection to the San Francisco Bay Trail south to Prospect Road which forms the city limit between San Jose and Saratoga. The study area follows San Tomas Aquino Creek and Saratoga Creek which flow northeast from the Santa Cruz Mountains to San Francisco Bay through the cities of Saratoga, Campbell, Cupertino, San Jose and Santa Clara. The proposed trail would be constructed adjacent to the creeks on a paved asphalt pathway for 5.19 miles. An additional 7.09 miles of the trail would be aligned on city streets using bicycle lanes and routes and the associated sidewalks. These on-street segments link together the creekside stretches to provide a continuous 12.28-mile trail alignment.

The concept of a streamside trail has been in the Santa Clara County General Plan for many years. However, it was in 1992 that the San Tomas Aquino/Saratoga Creek Trail was championed by local residents. The Santa Clara Education and Nature Trail Committee, a citizens group, appealed to the City of Santa Clara Parks and Recreation Commission and then to the Santa Clara County Board of Supervisors to proceed with an investigation of these creek corridors. The Board of Supervisors passed a resolution to appoint a 15-member committee, who became known as the Streamside Park Committee, to explore the potential for developing a trail adjacent to San Tomas Aquino and Saratoga Creeks (See Appendix 1: Board

Resolution). This grassroots effort was the catalyst for the preparation of the 1996 San Tomas Aquino/Saratoga Creek Trail Feasibility Report. In 1998, the Streamside Park Committee reconvened to take the next step in developing the San Tomas Aquino/Saratoga Creek Trail. They worked with staff and consultants to prepare this Master Plan report and the associated environmental documents.

The Streamside Park Committee established a mission and goals that guided the trail planning process and selection of the trail alignment. The Committee desired to build a streamside trail that integrated with the natural environment and provided recreation and alternative transportation benefits to businesses, schools and neighborhoods. The development of the trail is also intended to provide an opportunity to enhance the creek corridors as habitat for wildlife and as a scenic open space for trail users. The Committee's goals included coordinating the trail plan with all relevant jurisdictions and providing opportunities for public participation in the planning process.



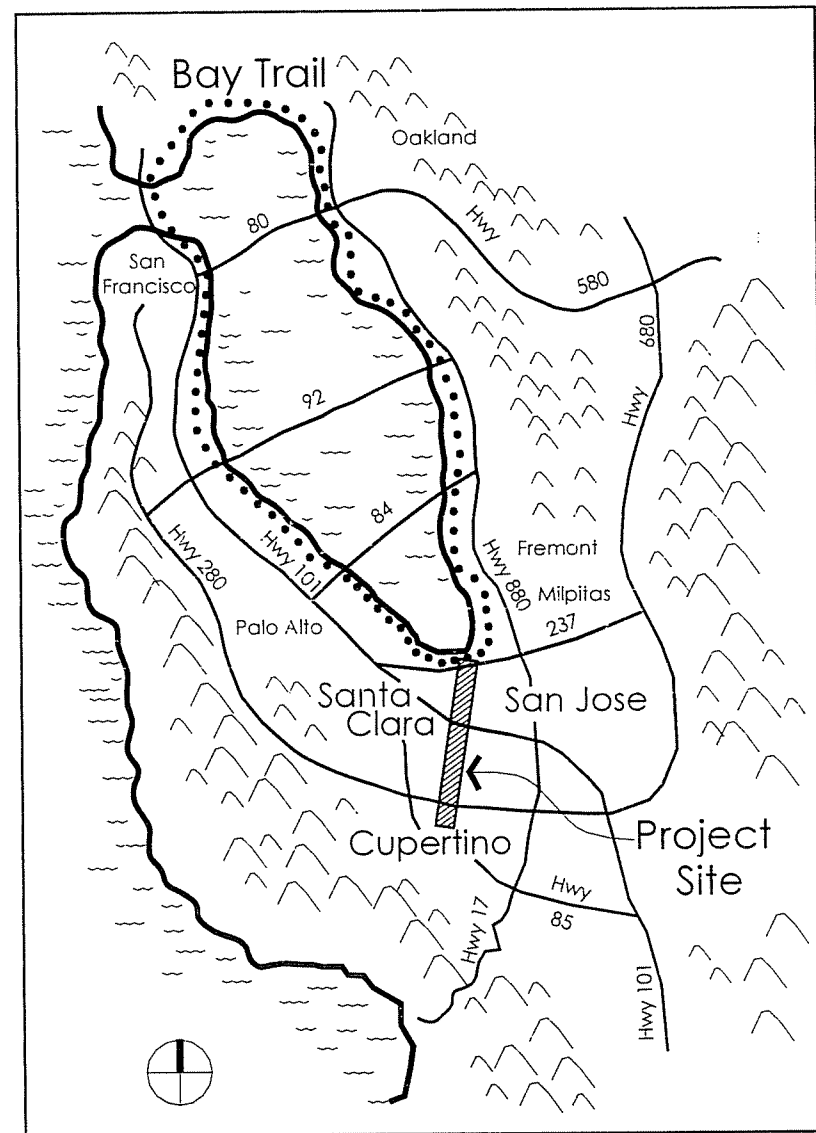
TRAIL OVERVIEW

REGIONAL SETTING

The San Tomas Aquino/Saratoga Creek Trail is located in Santa Clara County and extends through the heart of Silicon Valley. The trail corridor is bordered by the cities of Saratoga, Cupertino, San Jose and Santa Clara. The trail will connect many large high technology campuses with residential neighborhoods to the south and recreational areas to the north. The link between these land uses suggests that the trail will provide a practical alternative transportation route for residents and employees wishing to bicycle and walk (See Map 1 - Regional Setting Map).

The trail will extend from Highway 237 in Santa Clara to Prospect Road in San Jose. The 12.28-mile trail will traverse approximately 5-miles of the creek corridors and 7 miles of local streets to connect park and open space facilities, employment centers, transit systems, recreational/entertainment centers and residential areas. The trail will supply user-friendly, grade-separated crossings of many major roadways including Highways 237, 101 and 280, Central Expressway and CalTrain to facilitate walking and bicycling (See Map 2 - Master Plan Map located in back pocket).

The corridor connects to three regional trails, sixteen bus routes and all passenger rail lines operating within the South Bay. On its northern terminus the trail links with the San Francisco Bay Trail, a 400-mile trail encircling San Francisco and San Pablo Bays. Following south along the San Francisco Bay Trail, pedestrians and bicyclists will be able to reach the Guadalupe River Trail and its upstream connection to the Los Gatos



Map 1 - Regional Setting Map



SUMMARY OF TRAIL CONNECTIONS

- ◆ Bus Connections
 - VTA Routes: 23, 24, 26, 36, 43, 53, 57, 58, 60, 85, 101, 140, 141, 145, 304, and 304A
- ◆ Rail Connections
 - Light Rail
 - Great America Station
 - Amtrak Capitol Line
 - Santa Clara Station
 - Amtrak Altamont Commuter Express Line
 - Santa Clara Station
 - CalTrain
 - Lawrence Expressway Station
- ◆ Regional Trail Connections
 - Guadalupe River Trail
 - Los Gatos Creek Trail
 - San Francisco Bay Trail

Figure 1 - Summary of Trail Connections

Creek Trail at Confluence Point. The Bay Trail also connects to Alviso County Park and Don Edwards San Francisco Bay Wildlife Refuge Alviso Interpretive Center.

The Tasman Light Rail, traveling from San Jose to Mountain View, the Amtrak Capitol Line, that runs from

Colfax through Sacramento to San Jose and the Amtrak Altamont Commuter Express Line, that provides service between Stockton and San Jose will directly link with the trail to provide opportunities for intermodal commuting. A spur trail will extend to the CalTrain station located at Lawrence Expressway. CalTrain provides service from San Francisco to Gilroy (See *Figure 1- Summary of Trail Connections*).

The trail will offer bicycling and walking access to Intel, 3Com, Hewlett-Packard, Bay Networks, Verifone, Applied Materials, Siliconix, Compaq Computers and the McCandless Business Park. It will provide access to bayfront recreational areas including Great America, Santa Clara Golf and Tennis Club, Santa Clara Convention Center, 49ers Practice Camp, AMC Mercado 20 Cinemas, Sunnyvale Baylands and Alviso County Park via a regional urban trail corridor.

TRAIL PLANNING PROCESS

In 1992 the concept of a San Tomas Aquino/Saratoga Creek Trail was formulated and championed by City of Santa Clara residents and members of the City of Santa Clara Parks and Recreation Commission. In 1993, this coalition of residents and commissioners appealed to the Santa Clara County Board of Supervisors to proceed with an investigation of the trail corridor. In that same year, the Board of Supervisors officially established by resolution the San Tomas Aquino/Saratoga Creek Streamside Park Committee, a multi-jurisdictional ad hoc citizens committee to advise on the potential to preserve habitat and develop a trail along both San Tomas Aquino Creek and Saratoga Creek (See *Appendix 1: Board Resolution*).



TRAIL OVERVIEW

The Streamside Park Committee was successful in securing initial funding from Santa Clara County to investigate the feasibility of constructing a pedestrian and bicycle trail along the creek corridors. In 1996, a feasibility study was completed by the Sokale/Landry Collaborative under the direction of the County Parks and Recreation Department and the Streamside Park Committee. The study determined that approximately 50% of the trail could be aligned along the creek corridors. The remaining mileage needed to follow city streets due to limited land availability, bridge constraints and habitat sensitivity.

An initial step toward implementing the trail was taken by the City of Santa Clara. During the preparation of the Feasibility Report, Santa Clara entered into a joint use agreement with the Santa Clara Valley Water District to open access to the creek levees between Old Mountain View-Alviso Road and Highway 101. Santa Clara installed pedestrian gates and employed local patrols to make the existing levees available to the public. Today, area employees use the San Tomas Aquino Creek corridor as a place for relaxation and rejuvenation during weekday lunch and break hours. Employees enjoy jogging, walking and bicycling along the levees.

The Streamside Park Committee continues to work in conjunction with the municipalities along the creek corridors to realize the vision of this trail system. Funds and staffing to the Committee were secured from the Santa Clara County Parks and Recreation Commission for this Master Plan and the associated environmental

MISSION STATEMENT

The Streamside Park Committee, in coordination with the County of Santa Clara Parks and Recreation Department, will study the feasibility of constructing a streamside trail integrating the natural environment and providing benefits to schools, businesses and the community.

TRAIL GOALS

- To provide access to the creek at appropriate points, consider alternative alignments to ensure continuity of the trail and pursue opportunities with landowners as adjacent land is developed.
- To provide staging areas and use existing park facilities for such staging areas whenever possible.
- To maximize linkages to other trail systems and trail segments.
- To provide a safe and secure trail that is easy to maintain.
- To respect the property rights of adjacent landowners.
- To provide alternative transportation routes.
- To preserve and restore the natural creek environment where ever possible.
- To identify and preserve historical and cultural resources found along the creek.
- To encourage educational uses of the creek corridor.

Figure 2 - Streamside Park Committee Mission Statement and Trail Goals



documents. The County has offered this level of support for the trail due to its regional nature and inclusion in the 1995 *Santa Clara Countywide Trails Master Plan* as Trail Route C-5. The San Tomas Aquino/Saratoga Creek Trail Master Plan provides an opportunity to coordinate the efforts of multiple jurisdictions and develop a continuous trail alignment that best serves the needs of the region irrespective of city limit lines. The construction and future operations and maintenance of the trail will become the responsibility of the cities.

MISSION AND GOALS

In 1994 the Streamside Park Committee established a mission and goals that guided the trail planning process and selection of the trail alignment. The Committee desired to develop a streamside trail that integrated with the natural environment and provided recreational and alternative transportation benefits to businesses, schools and neighborhoods. The development of the trail is intended to provide an opportunity to enhance the creek corridors as habitat for wildlife and as a scenic open space for trail users.

The Streamside Park Committee and County Parks and Recreation staff defined a mission and goals for the 1996 Feasibility Report (See *Figure 2 - Streamside Park Committee Mission Statement and Trail Goals*). These trail goals directed the selection of the alignment and associated engineered features. The Committee also identified study goals that established the process used to involve the public and local agencies in the preparation of the reports (See *Figure 3 - Streamside Park Committee Feasibility Study Goals*).

These goals were further refined during the planning process to more specifically target the aims of the Master Plan. The purpose of this Master Plan is to define a trail alignment that serves the recreation and alternative transportation needs of the community. This Master Plan also identifies the major issues associated with trail development in an effort to assist the cities with the preparation of construction documents, environmental permits and grant funding applications (See *Figure 4 - Streamside Park Committee Master Plan Goals*).

FEASIBILITY STUDY GOALS

- To coordinate with all jurisdictions along the trail corridor to maximize support and ownership of the trail project.
- Public involvement should include schools, parks, businesses, trail users, citizens and adjacent neighbors.
- To encourage maximum volunteer participation on both the planning, development and construction of the trail.
- To establish the character and usage for the trail.
- To prepare a long range development plan for the trail, consistent with a regional trail concept, considering both active and passive recreation.

Figure 3 - Streamside Park Committee Feasibility Study Goals



TRAIL OVERVIEW

MASTER PLAN GOALS

- Build a constituency among those cities and agencies with jurisdiction over the creek corridors who will ultimately implement the trail plan.
- Refine the trail alignment by developing 'Reaches' or buildable segments and identifying intermodal connections, staging areas and neighborhood and business access points to the trail.
- Prepare development guidelines to assist cities with the implementation of the trail.
- Obtain environmental clearance through the California Environmental Quality Act (CEQA) to make way for trail development and to enhance the potential for obtaining external funding through grant programs.
- Provide a master plan and environmental documents to the respective jurisdictions which will be easy to implement and include CEQA mitigation measures.

Figure 4 - Streamside Park Committee Master Plan Goals

The Committee's goals included coordinating with all relevant jurisdictions and providing opportunities for public participation in the planning process. The project has been presented to and reviewed by many

audiences. These reports continue to be evaluated during the public review of the Master Plan and associated environmental documents. Several public meetings were held in conjunction with the Feasibility Report and additional public hearings are scheduled with the Master Plan. Presentations have been delivered to the County of Santa Clara Parks and Recreation Commission, City of Santa Clara Parks and Recreation Commission and Planning Commission, the City of San Jose Parks and Recreation Commission, the City of Cupertino Parks and Recreation Commission and the Santa Clara Valley Water District Board of Directors. In addition, numerous meetings have been held with the staff of these agencies. The input received through this public process has assisted the Streamside Park Committee, staff and consultants in the preparation of the Master Plan.

METHODOLOGY

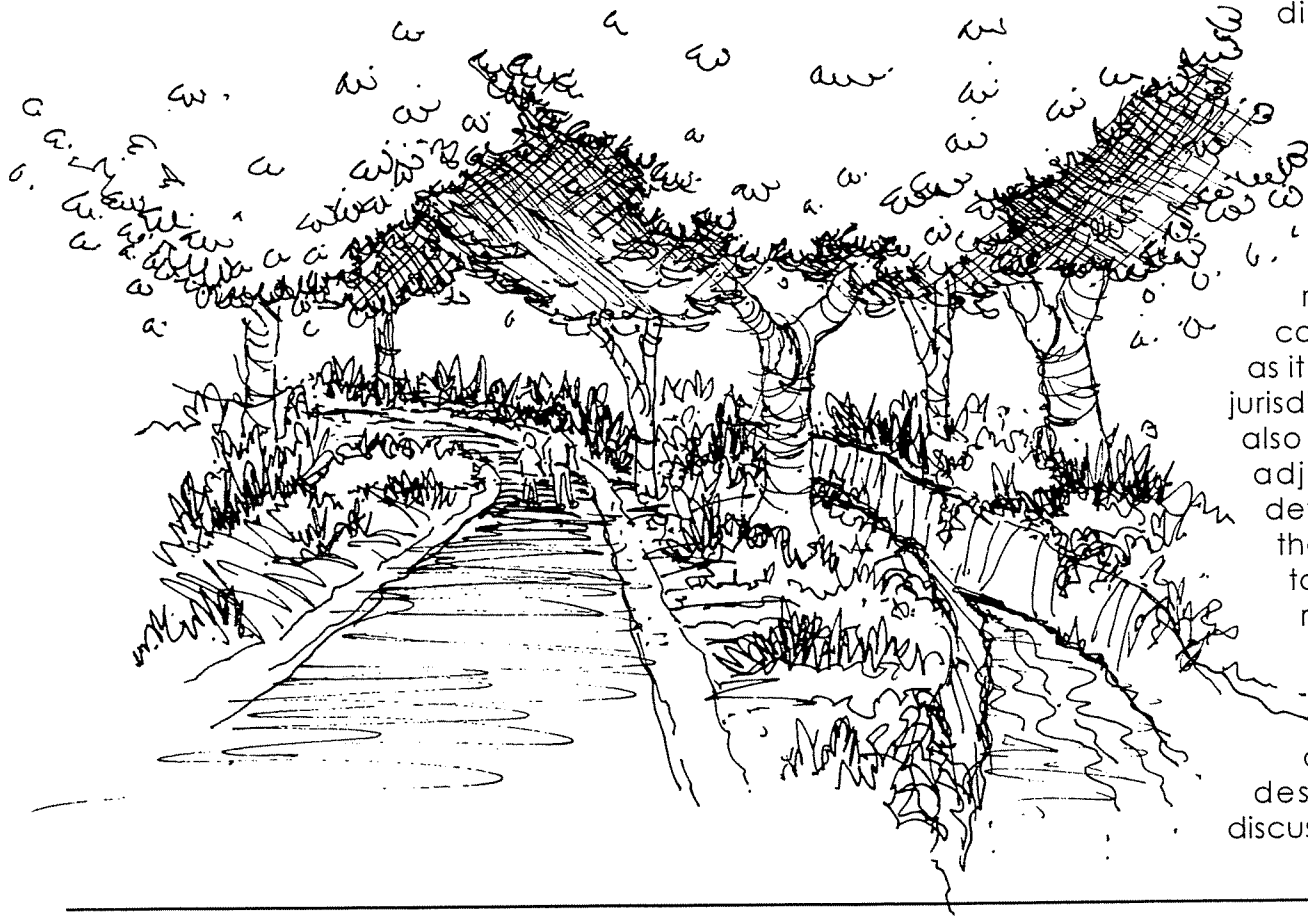
This Master Plan builds upon the work undertaken to prepare the 1996 Feasibility Report. During that time, background information pertinent to the trail corridor was reviewed in an effort to become familiar with the projects and processes that created the existing opportunities and constraints posed along the creeks. Significant time was spent directly observing field conditions. Preliminary alignment alternatives were outlined and presented to the many agencies with jurisdiction along creeks during the preparation of the Feasibility Report. Meetings were held in an effort to ascertain the concerns and needs of the agencies, as well as the design guidelines which control development along the creek corridors. Input from the



agencies was used to determine trail feasibility and refine the trail alignment alternatives and various engineering solutions prior to presentation to the Streamside Park Committee (See Appendix 2 : Agencies Contacted). The refined alignment alternatives were then presented to the Streamside Park Committee which selected a trail route that best met the goals of the study. Site analysis information and trail alignment alternatives were presented

over the course of six meetings. The entire alignment was presented at a public workshop attended by residents, agency staff and elected officials.

This Master Plan further refines the alignment by defining 'Reaches' or buildable segments of the trail and identifying intermodal connections, access points, staging areas and spur trails. Engineering solutions to constrained areas of the corridor were further evaluated and brought forward for discussion with impacted agencies. Budget estimates were recalculated to reflect changes in design and 1999 industry costs. Finally, design guidelines were written to define minimum trail development requirements and establish a consistent character for the trail as it is developed through multiple jurisdictions. The design guidelines also offer recommendations for adjacent public and private developments. This element of the design guidelines is intended to strengthen the integrity of the riparian habitat and improve the aesthetic quality of the trail through appropriate land use and landscaping directly adjacent to the creeks. The design guidelines provide a discussion and sample cross-sections





TRAIL OVERVIEW

and diagrams of the trail types, trail intersections, access points, staging areas and recommendations for native plant materials and landscaping. The Master Plan elements and refined trail alignment alternatives were presented over the course of five Streamside Park Committee meetings and many individual meetings with impacted agencies (See Appendix 2: *Agencies Contacted*).

IMPLEMENTATION

The first step to be taken toward implementing the trail is the adoption of this Master Plan and associated environmental documents by the County of Santa Clara and the cities of Santa Clara, San Jose and Cupertino. Adoption of these documents will satisfy the requirements of the California Environmental Quality Act (CEQA). The implementing cities may then initiate contracts for construction documents for any portion of the trail. The preparation of construction documents will require detailed geotechnical and hydrological investigations of those segments of the trail that include engineered structures. Construction documents must also be submitted to those agencies granting permits for work to occur in the creek corridors. The numerous permits required for the trail are detailed by reach in Chapter 5.

Of special importance to this trail project is the Santa Clara Valley Water District (SCVWD) Ordinance 83-2. This ordinance requires that any property improvement within 50 feet of a District facility must be submitted to the SCVWD for engineering review and approval prior to construction. Upon approval, the District will issue a

permit for construction. The implementing cities should contact the District early in the design process and work closely with the District staff throughout the development of construction documents.

Ultimately, it will be the responsibility of the implementing cities to secure funding, coordinate development of the construction documents, submit permit applications and oversee and inspect the construction of the trail. It is likely that the trail will be developed in segments, over time as funds become available.

CHAPTER 2 SIGNIFICANCE AND BENEFITS OF THE TRAIL

San Tomas Aquino / Saratoga Creek Trail Master Plan 1999



SIGNIFICANCE AND BENEFITS OF THE TRAIL



This chapter presents the significance and benefits of the trail to the community. It addresses the recreation, transportation and environmental benefits to be gained by local residents, students and area employees. The information contained in this chapter can be used to support grant applications. The San Tomas Aquino/Saratoga Creek Trail is recognized as a local and regional recreation and alternative transportation asset by the cities of Santa Clara, San Jose and Cupertino and by the County of Santa Clara and the Association of Bay Area Governments (ABAG). These agencies have identified the San Tomas Aquino Creek and Saratoga Creek corridors in their general plans.

The trail will provide access to 14 recreational facilities, 58 employment centers, 21 educational campuses and 11 retail districts. This 12.28-mile trail will provide area residents and local employees with access to bayfront recreational areas including Great America, Santa Clara Golf and Tennis Club, Santa Clara Convention Center, 49ers Practice Camp and the Mercado Shopping Center which includes 20 cinemas. The trail will directly link with the San Francisco Bay Trail, a 400-mile trail encircling San Francisco and San Pablo Bays. The Bay Trail connection will provide access to Sunnyvale Baylands Park, Alviso County Park, Don Edwards San Francisco Bay Wildlife Refuge and the Guadalupe River Trail.

The trail will offer bicycling and walking access to Intel, 3Com, Hewlett-Packard, Compaq Computers, Bay Networks, Verifone, Applied Materials and Siliconix. The trail will also provide access to four passenger rails

including CalTrain, Santa Clara Valley Transportation Authority Tasman Light Rail and Amtrak Capitol and Altamont Commuter Express lines. Sixteen bus routes cross the trail and offer additional opportunities for intermodal commuting (*Santa Clara Valley Transportation Authority, June 1997*).

Six secondary schools are located directly along the trail while an additional fourteen campuses are within 1/4 mile of the trail. Community college students will be able to access Mission College via the trail. Eleven retail shopping districts are located within 1/2 mile of the trail. The combined proximity of the trail to neighborhoods, schools, employment centers and retail districts and the alignment of the trail along creek levees and low traffic volume streets will encourage residents to walk and bicycle to destinations now only accessible by car.

Less dependence on the automobile has the potential to enhance the air quality in the South Bay. Fewer short car trips will improve air quality and reduce local street congestion. The health and fitness of trail users may also improve through walking and bicycling. The trail project proposes planting native trees and shrubs to provide habitat for wildlife and improve the scenic quality of the trail. These plants will also help to clean the air.



SIGNIFICANCE AND BENEFITS OF THE TRAIL

INCLUSION IN REGIONAL PLANS

San Tomas Aquino and Saratoga Creeks flow northeast from the Santa Cruz Mountains to San Francisco Bay through the cities of Saratoga, Campbell, Cupertino, San Jose and Santa Clara. Saratoga Creek was first identified as a streamside corridor of regional significance more than 25 years ago and was included in the Parks, Trails and Scenic Highways Element of the Santa Clara County General Plan (Santa Clara County, 1980). San Tomas Aquino Creek has more recently been considered a stream corridor of importance and is identified in the *1995 Santa Clara Countywide Trails Master Plan* as a connector trail. The San Tomas Aquino/Saratoga Creek Trail is recognized regionally by the Association of Bay Area Governments (ABAG) as part of the San Francisco Bay Trail Plan. The Bay Trail plan identifies the San Tomas Aquino/Saratoga Creek Trail as a connector route to the Bay Trail (ABAG, 1989).

The City of Santa Clara includes the San Tomas Aquino/Saratoga Creek Trail in the Transportation and Environmental Quality Elements of the General Plan. The policies and programs of the Santa Clara General Plan "support construction of the Bay Trail system including connector trails such as along Saratoga/San Tomas Aquino Creek and the Guadalupe River (City of Santa Clara, 1992)." The City of San Jose identifies the trail in the Scenic Routes and Trails diagram of the General Plan (City of San Jose, 1994). In March 1999, the City of Cupertino annexed the Rancho Rinconada neighborhood. This annexation placed a portion Reach 5 within Cupertino's city limits. In anticipation of this annexation, the City of Cupertino acknowledged the

San Tomas Aquino/Saratoga Creek Trail in the 1998 Bicycle Master Plan. A spur trail from the San Tomas Aquino/Saratoga Creek Trail directly links the Saratoga Creek corridor to a bicycle route being developed by Cupertino. This bicycle route passes by Cupertino High School and Sedgewick Elementary School before connecting to Creekside Park located on Calabazas Creek. The inclusion of the San Tomas Aquino/Saratoga Creek Trail in many regional and local plans further points to its significance as a recreation and alternative transportation corridor and as an open space resource for these communities.

RECREATION BENEFITS

The San Tomas Aquino/Saratoga Creek Trail offers both regional and local recreation benefits. Employees at any one of the 58 employment centers can take breaks on the trail away from traffic and in the outdoor environment. Area residents will benefit from improved pedestrian and bicycle access to parks and open spaces and the new opportunities to walk and bicycle to work and school along the creek corridors. The open space land adjacent to the creeks will offer opportunities for viewing wildlife and native plants.

CONNECTIONS TO REGIONAL TRAILS AND PARKS

The San Tomas Aquino/Saratoga Creek Trail is identified in the *1995 Santa Clara Countywide Trails Master Plan* as a connector trail that provides a convenient means of access to the network of trails located throughout the County. The trail will specifically link with the San Francisco Bay Trail at its terminus just north of Highway



237. This connection will allow residents to access Sunnyvale Baylands Park to the west and the Alviso County Park and Don Edwards San Francisco Bay Wildlife Refuge Alviso Interpretive Center located to the east. The trail will provide access to hundreds of acres of bayfront open space found within these parks and preserves.

CONNECTIONS TO CITY PARKS, RECREATION FACILITIES AND ATTRACTIONS

Locally, the trail will provide children and families with access to fourteen city parks located within 1/4 mile of the creek corridor. The trail will provide direct access to the Youth Center located on Cabrillo Avenue. It will offer a spur trail to the International Swim Center and Community Recreation Center located in Central Park on Kiely Boulevard in Santa Clara. The trail will provide a bicycle and pedestrian route to several major attractions including the Santa Clara Convention Center, Great America, Santa Clara Golf and Tennis Club, National Football League 49ers Practice Camp, AMC Mercado 20 Cinemas and a proposed soccer complex to be located adjacent to these points of interests.

TRANSPORTATION BENEFITS

The San Tomas Aquino/Saratoga Creek Trail will expand the alternative transportation opportunities available to Santa Clara Valley residents and employees. Intermodal commute opportunities will also be presented through connections to four passenger rail

lines and sixteen bus routes. Schools located along the creek corridor will be accessed more conveniently by the trail.

CONNECTIONS TO BUSINESSES

The neighborhoods located south of Central Expressway will gain direct pedestrian and bicycle access to the high technology industries surrounding Highway 101. Large corporations including Intel, 3Com, IBM, Siliconix, Rolm, Bay Networks and others call this area headquarters and provide more than 14,000 jobs north of Highway 101 (City of Santa Clara, 1991). Residents living south of Highway 280 will benefit from the improved alternative commute access to the large businesses located along Stevens Creek Boulevard that include Hewlett-Packard and Compaq Computers. More than 7,000 individuals travel to these work sites each day.

CONNECTIONS TO RAIL LINES

The trail will link with the Guadalupe Corridor Light Rail Line which travels between San Jose and Santa Clara and Tasman West Light Rail Line that runs from San Jose to Mountain View. The Tasman West Line is scheduled to be operational by 2000. The Guadalupe Corridor Line makes 104 round trips per weekday and serves approximately 1,000 riders at the Lick Mill, Great America and Old Ironsides stations. A short ramp from the trail will lead directly to the Great America Station. All Light Rail trains are equipped with interior bicycle racks. The intermodal connection provided by the trail and train should work to increase light rail ridership.



SIGNIFICANCE AND BENEFITS OF THE TRAIL

The trail will offer easy access to the Amtrak Santa Clara Station which serves both the Capitol Line, providing service from Colfax through Sacramento to San Jose, and the Altamont Commuter Express (ACE) Line, running between San Jose and Stockton. The Capitol Line makes six daily round trips and additional trips between Sacramento and San Jose are planned. The Altamont Commuter Express began service in the fall of 1998 and makes two daily round trips between the Central Valley and Silicon Valley. More than 75% of the riders use the Santa Clara Station as their destination stop. The demand to bring bicycles on board the Altamont Commuter Express has far exceeded capacity with more than 200 riders wishing to complete their intermodal commute on a bicycle. The Santa Clara Station is located at Stars and Stripes Drive. A short spur trail will connect the Santa Clara Station to the San Tomas Aquino/Saratoga Creek Trail.

A spur trail will also connect users to the CalTrain Lawrence Expressway Station. CalTrain runs from San Francisco to Gilroy. The CalTrain line makes 66 trips per day between San Francisco and San Jose and 8 trips per day between San Jose and Gilroy. CalTrain has expanded its capacity to carry bicycles on board making this intermodal commute system increasingly popular with Peninsula residents. The spur trail to the Lawrence Expressway Station will extend from the

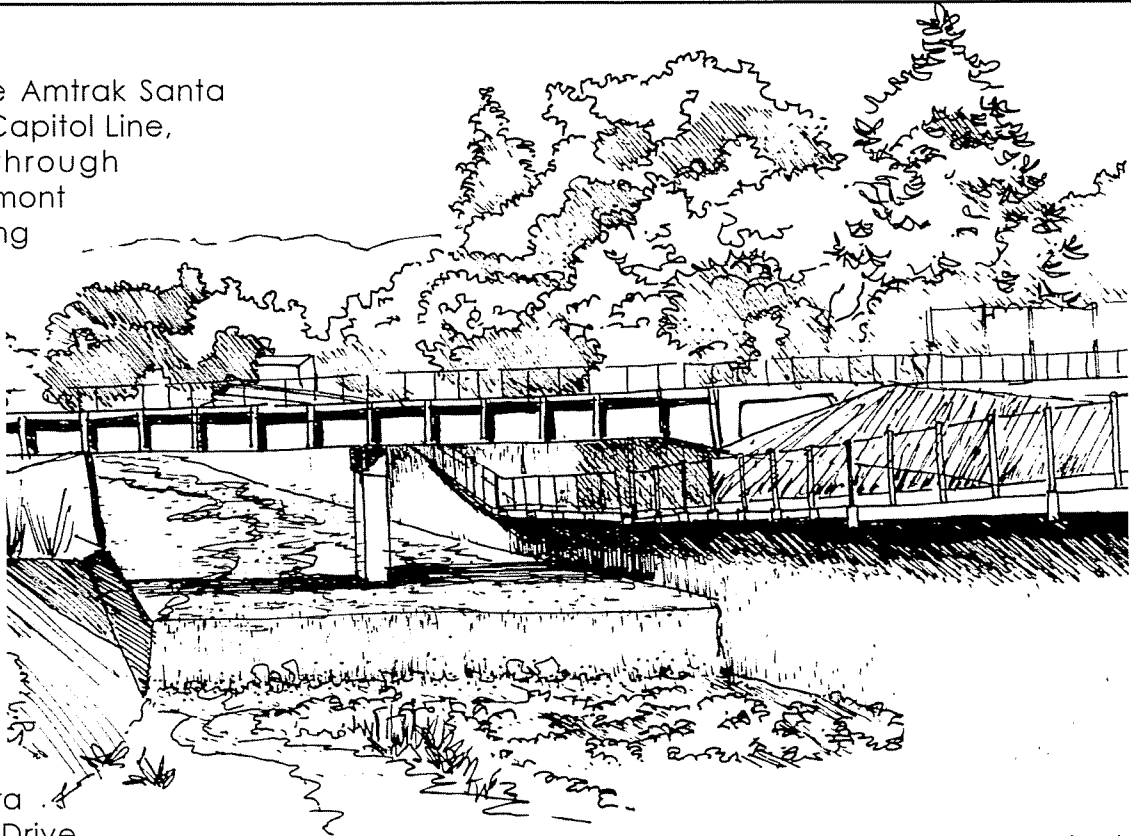


Illustration 1 - San Tomas Aquino/Saratoga Creek Trail crossing beneath the CalTrain tracks on a cantilevered underpass.

CalTrain tunnel to South Drive and Chromite Drive (See *Illustration 1 - San Tomas Aquino/Saratoga Creek Trail beneath CalTrain Tracks*). The spur trail will then intersect Monroe Street to provide access to the station via French Street.



CONNECTIONS TO BUSES

The San Tomas Aquino/Saratoga Creek Trail will intersect sixteen Santa Clara Valley Transportation Authority (VTA) bus lines. All VTA buses are now equipped with bicycle racks. This will facilitate bus-bike trips to and from work and school. The bus lines that connect with the trail include 23, 24, 26, 36, 43, 53, 57, 58, 60, 85, 101, 140, 141, 145, 304 and 304A.

CONNECTIONS TO SCHOOLS

The San Tomas Aquino/Saratoga Creek Trail will provide children with access to fourteen schools located within 1/4 mile of the creek corridor. Bowers Elementary, Sutter Elementary and Eisenhower Elementary schools are directly adjacent to the creek corridors. The trail will allow students to walk and bicycle from home to school. Mission College is located a short distance from the trail. Bicycle travel will be facilitated by the development of a spur trail to Mission College.

The trail connections to the creek corridors will also offer students and teachers the opportunity to extend their learning activities to the outdoors. The creek corridors provide a place to learn about science and history. Students will be able to explore the natural history of the flora and fauna of Santa Clara Valley and also examine the physical science properties of a flowing stream. Historically, native Americans inhabited the valley floor and traveled throughout the length of these creek corridors. Early explorers also visited this area and settlements were established along the creek. This rich history will provide an extension of the classroom to the 14 schools located within 1/4 mile of the trail and creek.

ENVIRONMENTAL BENEFITS

The environmental conditions along San Tomas Aquino Creek and Saratoga Creek should be enhanced by the development of the trail. The trail project provides an opportunity to restore natural resources and decrease the dependency on the automobile as a primary form of transportation. The construction of the trail will include the installation of native plants to increase the habitat available for wildlife and to create an inviting place in which to recreate and commute on foot and by bicycle.

ENHANCEMENT OF NATURAL RESOURCES

San Tomas Aquino Creek and Saratoga Creek offer one of the few locations in the cities of Santa Clara, Cupertino and San Jose where riparian and wetland habitat can be preserved and enhanced for wildlife and human visitors. The downstream portion of the corridor has been heavily manipulated by flood control projects. However, the opportunity exists to enhance the current condition of the creeks. The trail project may inspire residents, local employees and government staff to work together to build a trail and install native shrubs and trees on all lands that lie directly adjacent to the creek channels. The addition of indigenous flora would enhance the integrity of the creek corridor and replenish the greenbelt once provided by the riparian habitat.

All trail construction projects will include a habitat enhancement component that includes native plant landscaping, irrigation, maintenance and monitoring to ensure that the goal of enhancing the creek corridor is



SIGNIFICANCE AND BENEFITS OF THE TRAIL

being achieved simultaneously with the development of the trail. This Master Plan provides design guidelines for public and private development projects adjacent to the creeks. These guidelines will assist the cities in implementing the goal of enhancing the creek corridor. The guidelines include recommendations regarding land use, creek set backs, plant material and other construction permit related issues. The intent of these guidelines is to ensure that all development projects adjacent to the creek and trail work toward the goal of restoring, to the greatest extent possible, the integrity of the riparian and wetland habitats along San Tomas Aquino and Saratoga Creeks. Habitat enhancements installed along the backyards of these private and public projects will enrich the creek corridors for both its wildlife inhabitants and its human visitors and help to improve local air quality (See *Chapter 4 - Design Guidelines*).

IMPROVED AIR QUALITY

The expansion of alternative transportation opportunities should encourage more individuals to walk and bicycle to work sites, schools and shops. The Bay Area Air Quality Management District (BAAQMD) suggests that the construction of an efficient bicycle and pedestrian circulation system can decrease the dependence on the automobile by 2%. The development of bicycle and pedestrian facilities is often recommended as one strategy to mitigate the air quality impacts of large-scale development projects (BAAQMD, 1996).

An efficient bicycle and pedestrian system includes sidewalks and Class I, II and III routes within a 1/4 mile of desired destinations. The system also includes bicycle sensors to active traffic signals on Class II and III routes, shade trees and trail amenities to increase the efficiency and appeal of bicycling and walking. The San Tomas Aquino/Saratoga Creek Trail will provide these capital improvements. An effective alternative transportation system must also be supported by on-site facilities for commuters which include bicycle racks and lockers, shower facilities, route maps and repair equipment. These on-site support facilities must be developed in conjunction with private developments and should be required by the permitting cities.

The San Tomas Aquino/Saratoga Creek Trail has an additional alternative commute advantage over many other trail systems. Its close proximity to four passenger rail lines and sixteen bus routes makes intermodal commuting a viable form of travel. Intermodal commuting increases the distance alternative commuters are willing and able to travel. An increase in alternative travel has the potential to reduce the dependency on the automobile and decrease air pollution caused by the automobile and aggravated by traffic congestion. The alternative transportation options provided by the San Tomas Aquino/Saratoga Creek Trail will benefit all residents and employees of Silicon Valley by improving the local air quality.

CHAPTER 3 TRAIL PLAN



San Tomas Aquino / Saratoga Creek Trail Master Plan 1999



Chapter 3 describes the 12.28-mile trail alignment that extends from the San Francisco Bay Trail, near Highway 237, to Prospect Road in San Jose. The trail alignment follows San Tomas Aquino Creek from Highway 237 to Monroe Street in the City of Santa Clara. It then extends along roadways in the cities of Santa Clara, Cupertino and San Jose before rejoining the creek corridor. At Barnhart Avenue, the trail reconnects with the corridor and parallels Saratoga Creek until reaching Murdock Park in San Jose. It extends a short distance on city streets from Murdock Park to Prospect Road.

The trail includes ten underpasses, two tunnels, four pedestrian bridges and two at-grade street crossings along the alignment. Many of the underpasses are subject to seasonal closures due to flooding and high tides. These facilities must be monitored by the cities and closed during storm events. Winter trail routes which circumnavigate these storm prone underpasses are included in the Master Plan.

The trail alignment is divided into six reaches or trail segments to facilitate development. The reaches vary in length and engineering complexity. The reaches begin and end at points that provide logical connections to the existing pedestrian and bicycle circulation system. The six reaches include:

- Reach 1** – Highway 237 to Agnew Road
- Reach 2** – Agnew Road to Scott Boulevard
- Reach 3** – Scott Boulevard to Monroe Avenue
- Reach 4** – Monroe Avenue to Pruneridge Avenue
- Reach 5** – Pruneridge Avenue to Bollinger Road
- Reach 6** – Bollinger Road to Prospect Road

This chapter begins with a short discussion of the terminology used to describe the features of the trail. The chapter continues with an individual description of each of the six reaches. Maps, cross-sections and drawings are provided to illustrate the engineered structures required to provide street and stream crossings. Important destinations that can be accessed from the trail are highlighted by reach. This chapter also identifies the proposed trail access points, staging areas and spur trails. Construction projects proposed by other agencies which may impact the trail or provide opportunities for joint construction are also discussed.

The most significant construction projects to impact the development of the trail are the levee improvements planned by the Santa Clara Valley Water District (SCVWD). At the time of writing, SCVWD was completing an existing conditions study of the levees. This information is to be used to develop alternative solutions to enhancing the flood protection afforded the area between Highway 101 and Highway 237. Any trail paving proposed on the top of the raised levees must be coordinated with SCVWD's future levee improvement plans. These plans may require that the construction of Reaches 1 and 2 be staged over time. Underpasses and ramps could be implemented first followed by paving of the levees. This would allow the trail to open to the public, but potentially limit the types of uses allowed on the trail until the levee surfacing had been completed. This Master Plan also proposes design solutions that anticipate and accommodate, to the greatest extent possible, the nature of the levee improvements so that development of the trail can proceed (*See Chapter 4 - Design Guidelines*).



FEATURES OF THE TRAIL

In this chapter, several terms are used frequently throughout the text. The terms include points of interest, engineered structures, access points, staging areas and spur trails. Points of interest are destinations located along the trail that are likely to attract many trail users. Engineered structures are the improvements proposed to provide a pathway that is grade-separated from the many roadways that cross the creek corridor. Access points, staging areas and spur trails refer to trailside improvements that are proposed to enhance accessibility and increase trail use.

Points of Interest along the trail are identified by reach. Points of interests are important destinations that include employment centers, retail districts, rail stations, educational campuses and recreational facilities. These activity centers are generally located directly along the trail or within a short distance from the trail. Those that are located off the trail are included in this Master Plan if they can be reached on bicycle or on foot via a spur trail.

Engineered Structures include underpasses, pedestrian bridges, tunnels and at-grade street crossings. The underpasses extend along the creek bank and cross beneath roadways. In some instances, the underpasses follow existing maintenance access roads. Many of the underpasses are subject to seasonal closures due to winter storms and high tides. Pedestrian bridges are proposed to provide necessary connections across the creek corridor as the trail meanders from the east to west banks of the creek. Two tunnels are proposed where creek conditions could not accommodate an in-channel

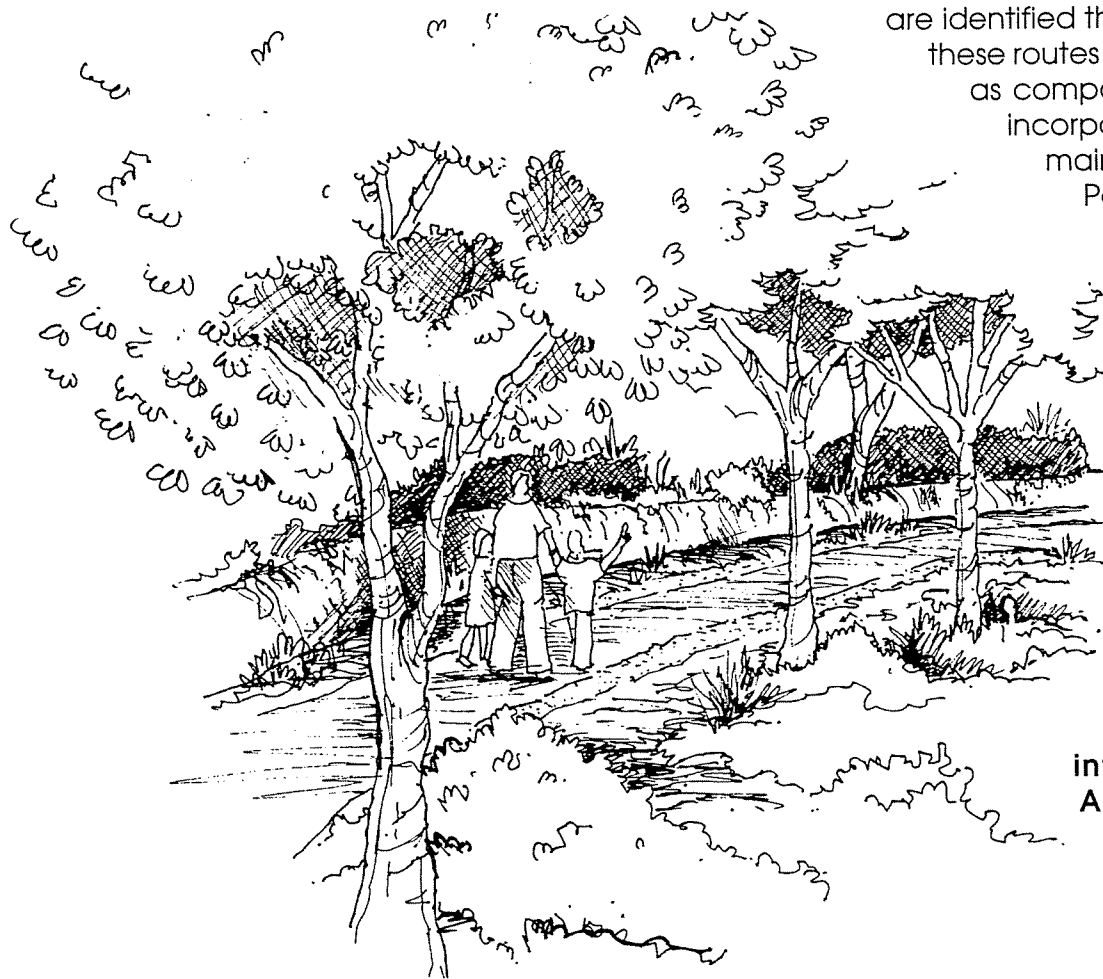
underpass. In another two areas, at-grade street crossings are proposed also as a result of limiting conditions within the creek corridor.

Access Points provide a direct connection to the trail from employment centers, neighborhoods, recreational facilities and the public transportation and roadway systems. Access points are improved and may include bicycle/pedestrian bridges, ramps, short segments of trail, gates, bollards and signage. Access points are intended to accommodate trail users wishing to reach the trail by bicycle and on foot. Access points are identified at specific locations and are limited in number to minimize cross traffic and provide safe access to the trail. The access points have been categorized into five groups. They include corporate access, neighborhood access, recreational access, educational access and roadway access.

Staging Areas have been located throughout the 12.28-mile trail alignment. Staging areas are planned to accommodate those who wish to drive to a trailhead. A staging area provides access to the trail, automobile parking and trail amenities such as restrooms, drinking fountains, signage, etc. Of the six proposed staging areas, only one would be developed as a new facility. The other five locations identified as staging areas are existing school and recreational facilities. These sites would jointly serve the trail and the existing facility use.



Spur Trails are routes that leave the main trail to provide connections to the public transportation system and points of interest located a short distance away. Many spur trails are identified throughout the length of the trail. Some of these routes are in existence and others are proposed as components of this Master Plan. The spur trails incorporate the same trail classifications as the main trail alignment. There are Class I - Bicycle Pathways, Class II - On-Street Bicycle Lanes, Class III - On-Street Bicycle Routes and Soft Surface Pedestrian Only Trails. Please refer to Chapter 4 - Design Guidelines for additional details of these trail features.



HOW TO USE THE REACH MAPS AND LEGEND

A fold-out legend is located on page 115. When folded out to the right, it provides a legend to the six reach maps making it easier to interpret each of the trail alignments. A complete trail map is also included in the back of this report.



TRAIL PLAN - REACH 1

REACH 1 - HIGHWAY 237 TO AGNEW ROAD

Reach 1 will extend from Highway 237 to Agnew Road in the city of Santa Clara. The terminus of the trail would intersect the San Francisco Bay Trail just north of Highway 237. This 1.76 mile reach would be aligned along San Tomas Aquino Creek on levees owned by the Santa Clara Valley Water District. The proposed alignment would pass beneath four roadways and cross Agnew Road at-grade to connect with on-street bicycle and pedestrian facilities (See Map 3 - Reach 1 - Highway 237 to Agnew Road).

POINTS OF INTEREST

EMPLOYMENT CENTERS AND EDUCATIONAL CAMPUSES

Reach 1 provides access to several employment centers and Mission College. The high technology corporations and business parks located along Reach 1 include 3Com, Bay Networks, Marriott Business Park and Verifone. These businesses employ 15,000 professionals. Mission College, with an enrollment of 9,500 students, is also served by Reach 1.

RAIL STATIONS

The San Tomas Aquino/Saratoga Trail provides quick access via a short spur trail to the Santa Clara Amtrak Station located on Stars and Stripes Way. This station serves the Capitol Line and the Altamont Commuter Express (ACE) Line. The Capitol Line extends from Colfax through Sacramento to San Jose. The Altamont Commuter Express Line runs from Stockton to San Jose. Reach 1 also offers nearly direct access to the Great

POINTS OF INTEREST ALONG REACH 1

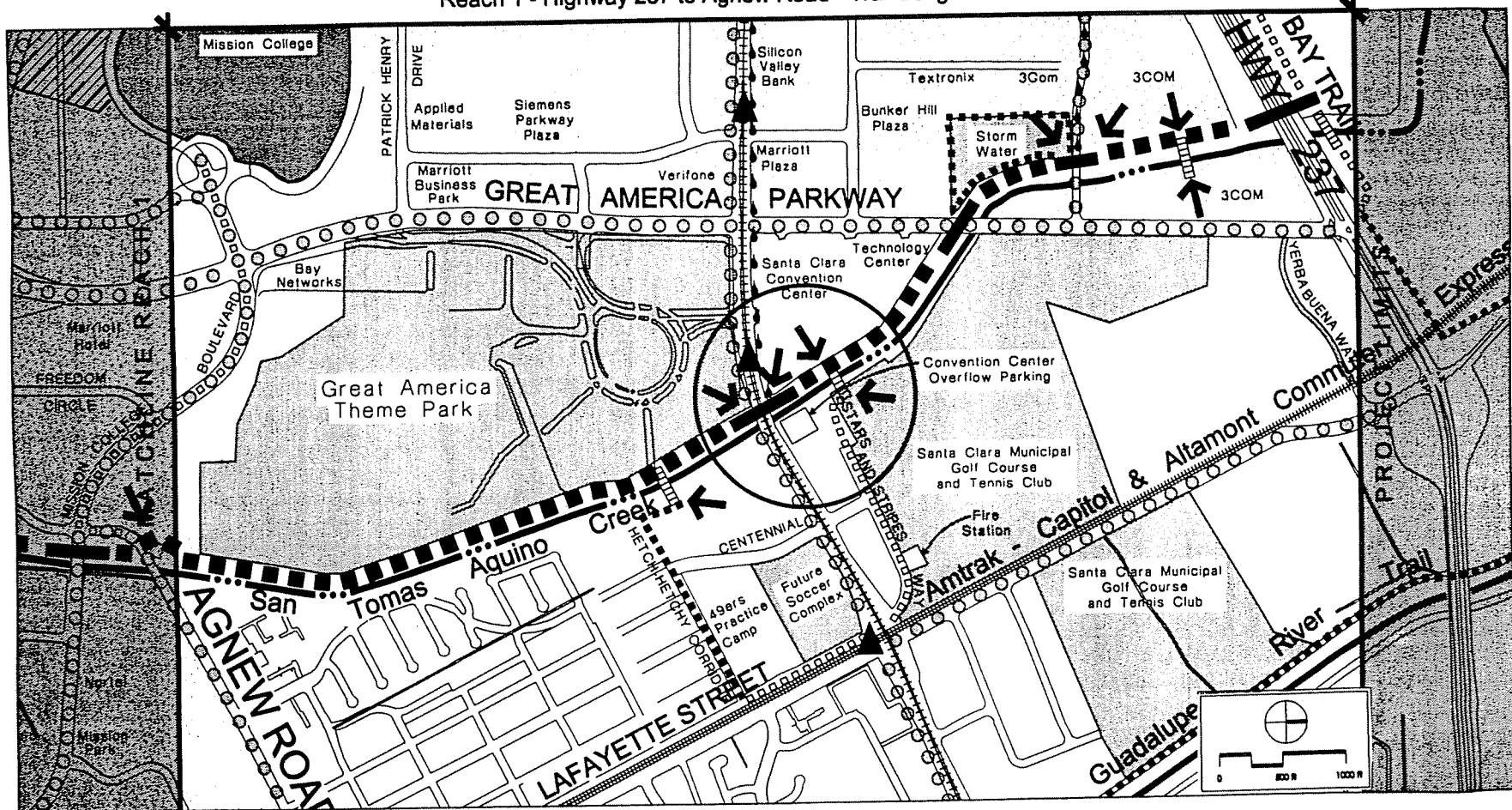
- ◆ Employment Centers
 - 3Com
 - Bay Networks
 - Marriott Business Park
 - Verifone
- ◆ Educational Campuses
 - Mission College
- ◆ Rail Stations
 - Amtrak Altamont Commuter Express Line
 - Amtrak Capitol Line
 - Tasman Light Rail
- ◆ Recreational Facilities
 - 49ers Practice Camp
 - Alviso Interpretive Center
 - Alviso County Park
 - Great America Theme Park
 - Proposed Soccer Complex
 - Santa Clara Golf Course and Tennis Club
 - City of Santa Clara Storm Water Ponds
 - Sunnyvale Baylands Park

Figure 5 - Points of Interest along Reach 1

TRAIL PLAN - REACH 1



Reach 1 - Highway 237 to Agnew Road - Trail Length: 1.76 miles



Map 3 - Reach 1 - Highway 237 to Agnew Road - City of Santa Clara



TRAIL PLAN - REACH 1

America Light Rail Station. This station serves the existing Guadalupe Corridor which travels between San Jose and Santa Clara and Tasman West Line which will extend from San Jose to Mountain View. The proximity of the trail to these passenger rail lines enhances the opportunity for intermodal commuting. Employees can ride the rail and complete their commute with a short walk or bicycle ride to work.

RECREATIONAL FACILITIES

Reach 1 provides direct access to many of the recreational facilities located along the bayshore. Great America Theme Park, the 49ers Practice Camp, the Santa Clara Golf and Tennis Club, the City of Santa Clara Storm Water Ponds and the proposed soccer complex are located directly along the trail. Sunnyvale Baylands Park, the Alviso County Park and the Don Edwards San Francisco Bay Wildlife Refuge Alviso Interpretive Center (Alviso Interpretive Center) can be reached on foot or by bicycle from the Bay Trail. These open space lands and facilities are visited by more than four million visitors annually (See Figure 5 - *Points of Interest along Reach 1*).

TRAIL ALIGNMENT

The Reach 1 trail alignment would begin on a Santa Clara Valley Water District levee located on the west bank of San Tomas Aquino Creek just downstream of Highway 237. Reach 1 would link with the San Francisco Bay Trail at this terminus. The reach would extend from this point along the west bank levee to Agnew Road (See Map 3 - *Reach 1 - Highway 237 to Agnew Road*).

Reach 1 would cross beneath Highway 237, Old Mountain View-Alviso Road and Great America Parkway. In this vicinity, the trail design makes use of an existing pedestrian/bicycle bridge located at 3Com to provide access to this local employer.

Upon returning to the top-of-bank from the Great America Parkway underpass, the trail would continue along the west bank and link to an existing pedestrian/bicycle bridge that spans the creek between the Santa Clara Convention Center and the Santa Clara Golf and Tennis Club. This bridge would allow trail users to access the staging area and connect to the streets in front of these public facilities. A short spur trail using this bridge is proposed to the Santa Clara Amtrak Station located on Stars and Stripes Way. This station serves the Capitol Line and the Altamont Commuter Express (ACE) Line.

Once past these points of interest, the trail would again descend into the flood control channel to pass beneath the bridge supporting both Tasman Drive and the Tasman Light Rail Line. Roadway access would be provided at Tasman Drive to connect trail users to the Great America Light Rail Station. The trail would continue south past Tasman Drive and cross the entrance of a vehicular bridge that provides access to Great America's auxiliary parking located on the east bank of the creek. This vehicular bridge is integrated into the trail plan to provide a connection to the Hetch-Hetchy corridor, the 49ers Practice Camp and the proposed soccer complex. Reach 1 would extend past Great America Theme Park to Agnew Road to connect with the on-street bicycle and pedestrian system (See Figure 6 - *Summary of Reach 1 Trail Improvements*).



SUMMARY OF REACH 1 TRAIL IMPROVEMENTS

- ◆ Engineered Structures
 - Underpasses
 - Great America Parkway
 - Highway 237
 - Old Mountain View-Alviso Road
 - Tasman Drive
 - Pedestrian Bridges
 - 3Com Corporation - Existing
 - Great America Auxiliary Parking - Existing
 - Santa Clara Convention Center - Existing
 - At-Grade Street Crossings
 - Agnew Road
- ◆ Access Points
 - Corporate Access
 - 3Com
 - Santa Clara Convention Center
 - Recreational Access
 - Bay Trail at Highway 237
- Great America Theme Park
- Santa Clara Golf and Tennis Club
- City of Santa Clara Storm Water Ponds
- Roadway Access
 - Agnew Road
 - Tasman Drive
 - Old Mountain View-Alviso Road
- ◆ Staging Areas
 - Santa Clara Convention Center Overflow Parking
- ◆ Spur Trails
 - Bay Trail to Calabazas Creek Trail and Guadalupe River Parkway
 - Hetch-Hetchy Corridor
 - Mission College Boulevard to Mission College
 - City of Santa Clara Storm Water Ponds
 - Stars and Stripes Way to Santa Clara Amtrak Station

Figure 6 - Summary of Reach 1 Trail Improvements

ENGINEERED STRUCTURES

UNDERPASSES

The trail would be ramped below Highway 237, Old Mountain View-Alviso Road, Great America Parkway and Tasman Drive into the flood control channel. The earthen levees beneath these structures would be

excavated to widen the creek channel. This construction would preserve the flood carrying capacity of the creek channel and create a landing for the trail. The designs of the Highway 237, Great America Parkway and Tasman Drive bridges are identical and a single underpass solution is proposed for these structures (See Figure 7). This design may increase capacity at some of these bridges.



TRAIL PLAN - REACH 1

Unfortunately, the volume of water flowing through the creek during winter storms, the tidal cycle and existing carrying capacity of the channel do not allow for uninterrupted year-round trail use. The elevation of the trail beneath these structures would vary and be dependent upon bridge clearance. The amount of clearance and the impact of the tidal cycle and storm events would determine the frequency of trail

closures. The trail must be monitored for closure during winter storms and shut-down through the use of gates during these events. All of the underpasses downstream of Highway 101 would be subject to temporary closures during significant winter storms.

The need for trail closures is particularly true for the Old Mountain View-Alviso Road bridge. This structure has

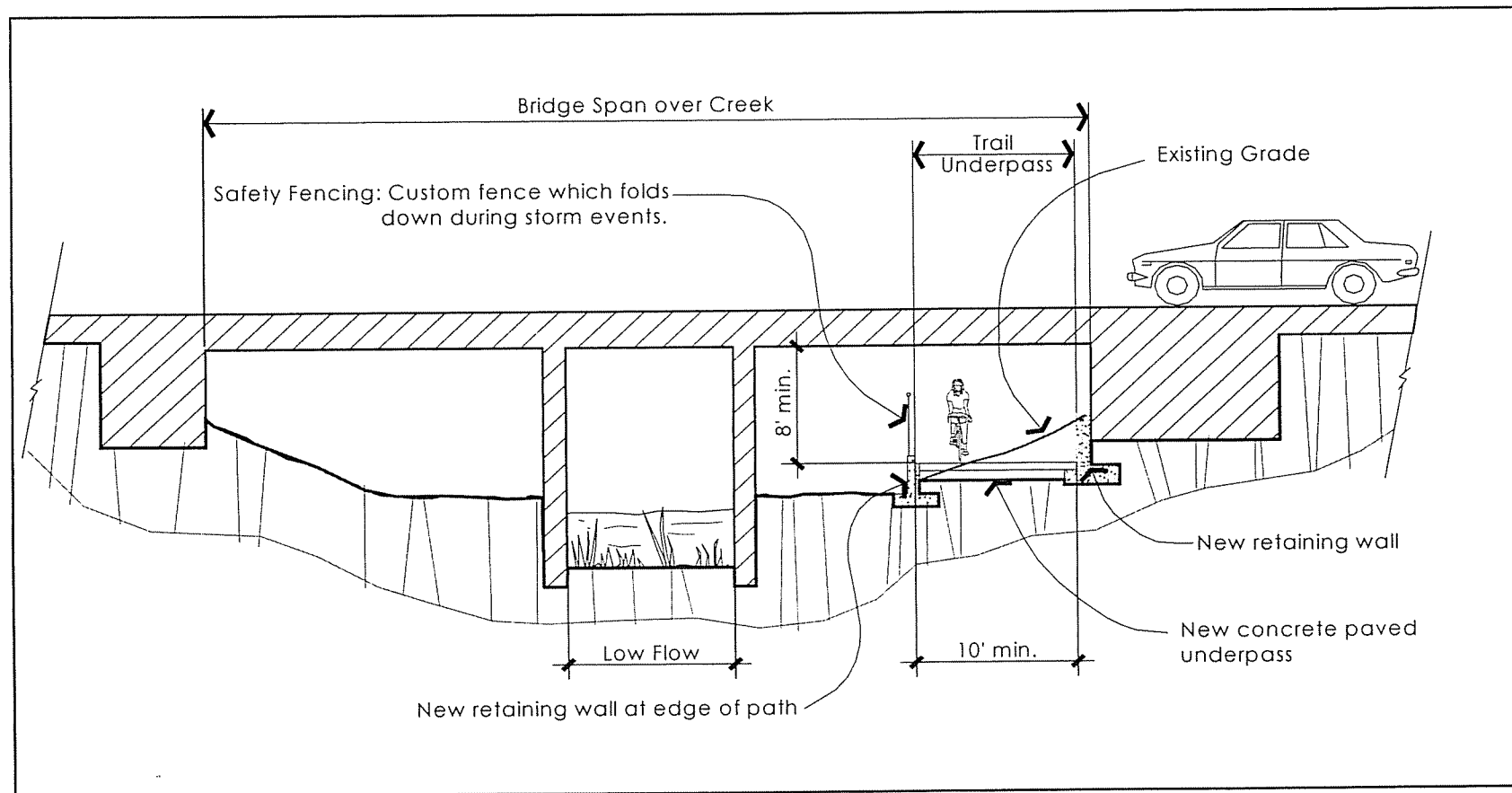


Figure 7 - Conceptual Engineering Design of Highway 237, Great America Parkway and Tasman Drive Underpasses.



the lowest clearance and is therefore impacted to the greatest degree by high tides and storm events. Hydrology reports prepared by Einarson, Fowler & Watson indicate the Old Mountain View-Alviso Road underpass would be flooded approximately 4 hours per tidal cycle during mean higher high water. This would require temporary closure of this underpass 4 or 5 days per month during the highest tides of the year which occur in January and June. Reopening of this underpass on these days would require sweeping to remove the fine silts deposited on the trail by the tide. During closures, trail user could be routed to the winter trail alignment (See Map 3 - Reach 1 - Highway 237 to Agnew Road). This operational impact could be eliminated by either of two alternatives. Both would require evaluation by the Santa Clara Valley Water District before the preparation of construction documents.

The first design employs the use of a low flood wall along the outer edge of the trail underpass (See Figure 8). This may alleviate the need to close and sweep the trail during mean higher high water conditions. This underpass design has been successfully implemented by the East Bay Regional Park District.

The second design would abandon Old Mountain View-Alviso Road from the west bank of the creek to Great America Parkway. Closure of this 380 feet of roadway and removal of the bridge would allow the trail to extend along the top of the levee and remain out of the flood control channel all together. Closure of this roadway would require analysis by the City of Santa Clara. This concept could provide an immediate solution to the trail flooding issue or could be

implemented in the future should trail usage dictate the need for fewer trail closures.

AT-GRADE STREET CROSSINGS

The Agnew Road bridge is relatively old and can not be easily retrofitted to accommodate an in-channel underpass for pedestrians and bicyclists. An at-grade street crossing at Agnew Road is feasible due to low traffic volumes and speeds. The intersection at Agnew Road and the employee parking access road to Great America would be reconfigured to include a full, three-way stop, crosswalk with bright colored paint or pavers to call special attention to the crossing, curb-cuts, signing and median island with fencing (See Figure 9). This intersection would allow trail users to cross Agnew Road and continue south along the west bank of the creek to Reach 2.

ACCESS POINTS

Trail access is proposed at corporate campuses, recreational facilities and three roadways along the of Highway 237. The Bay Trail provides a route to Sunnyvale Baylands to the north and Alviso County Park and Alviso Interpretive Center to the south.

Roadway access is provided in three areas. Old Mountain View-Alviso Road serves a number of corporations located within a short distance from the trail. Tasman Drive serves the Great America Light Rail Station. Agnew Road provides a relatively low traffic volume street to terminate Reach 1 and offers a route to the Sun Microsystems campus located at Agnews West.

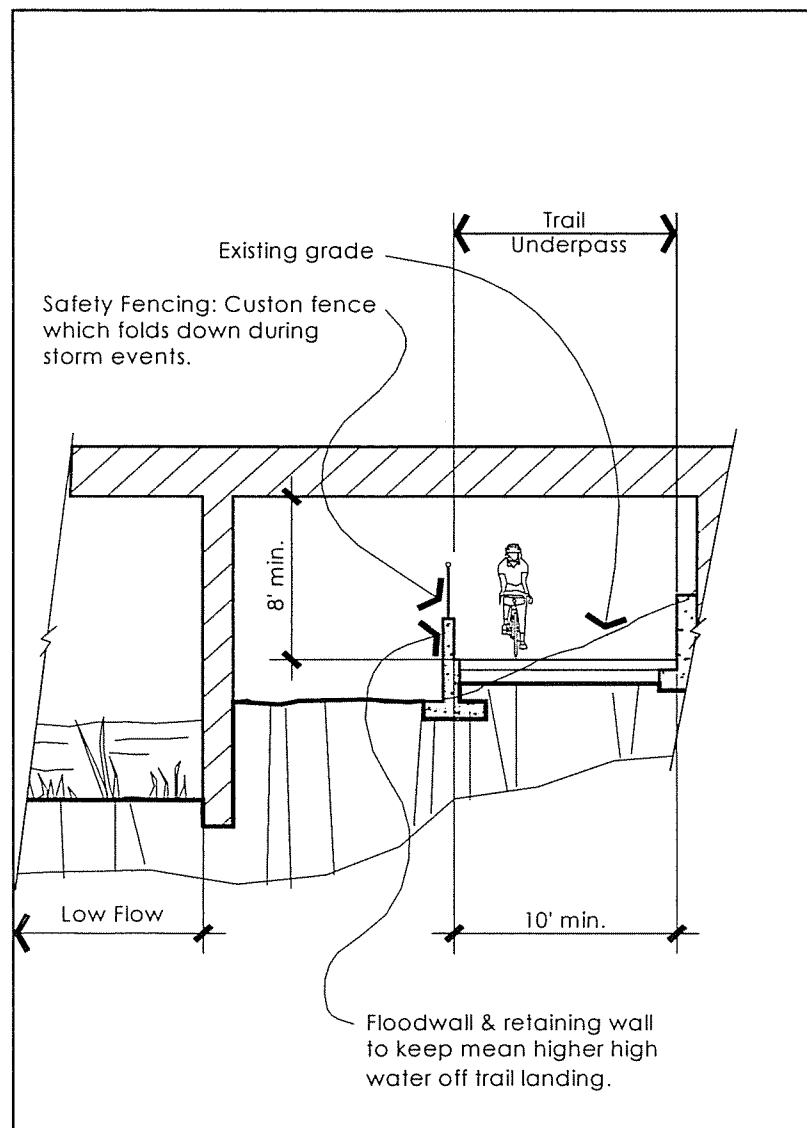


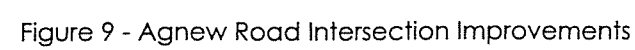
Figure 8 - Conceptual Engineering Design of Old Mountain View-Alviso Road Underpass with Flood Wall.

STAGING AREAS

A single staging area is located along Reach 1. The Santa Clara Convention Center overflow parking provides a public facility where parking can be shared by convention center patrons and trail users. An existing ramp from the parking lot to the pedestrian/bicycle bridge provides access to the top of the levee. It is likely that most trail parking would occur on the weekends. This area will require improvements including designated trail parking spaces, signage and trail amenities.

SPUR TRAILS

Spur trails provide routes to points of interest located a short distance from the San Tomas Aquino/Saratoga Creek Trail. Five spur trails are identified in Reach 1. Three of these spurs served recreational facilities. The Bay Trail provides access to several nearby parks and to the Calabazas Creek Trail and the Guadalupe River Trail. A spur trail is proposed along the Hetch-Hetchy corridor to link the neighborhood to the trail. A loop trail around the City of Santa Clara's Storm Water Ponds is proposed to offer an additional recreational experience. Spur trails to Mission College and the Santa Clara Amtrak Station are intended to facilitate commuting.





REACH 2 - AGNEW ROAD TO SCOTT BOULEVARD

Reach 2 will extend from Agnew Road to Scott Boulevard in the City of Santa Clara. This .84 mile reach would continue along the west bank of San Tomas Aquino Creek on levees owned by the Santa Clara Valley Water District. The proposed alignment would pass beneath three roadways (See Map 4 - Reach 2 - Agnew Road to Scott Boulevard).

POINTS OF INTEREST

EMPLOYMENT CENTERS AND RETAIL DISTRICTS

Reach 2 would provide access to many employment centers. The high technology corporations located along Reach 2 include Applied Materials, Hewlett-Packard, Intel Corporation, Marriott Hotel, Siliconix and Sun Microsystems. These businesses employ several thousand. The Mercado Center, complete with 20 cinemas, would also be accessed by Reach 2 (See Figure 10 - Points of Interest along Reach 2).

TRAIL ALIGNMENT

Reach 2 is the shortest reach within the trail alignment, but includes three underpasses. These underpasses present significant engineering challenges and offer limited access to the on-street bicycle and pedestrian system. Reach 2 would begin at the Agnew Road at-grade street crossing constructed as a part of Reach 1. It would cross beneath Mission College Boulevard, Highway 101 and Scott Boulevard. Bicycle and pedestrian connections to the roadway system would be provided only at Agnew Road and Scott Boulevard. Mission College

POINTS OF INTEREST ALONG REACH 2

- ◆ Employment Centers
 - Applied Materials
 - Hewlett-Packard Company
 - Intel Corporation
 - Marriott Hotel
 - Siliconix
 - Sun Microsystems
- ◆ Retail Districts
 - Mercado Center
- ◆ Recreational Facilities
 - AMC Mercado 20 Cinemas

Figure 10 - Points of Interest along Reach 2

Boulevard is too close to Agnew Road to warrant an additional roadway connection (See Figure 11 - Summary of Reach 2 Trail Improvements).

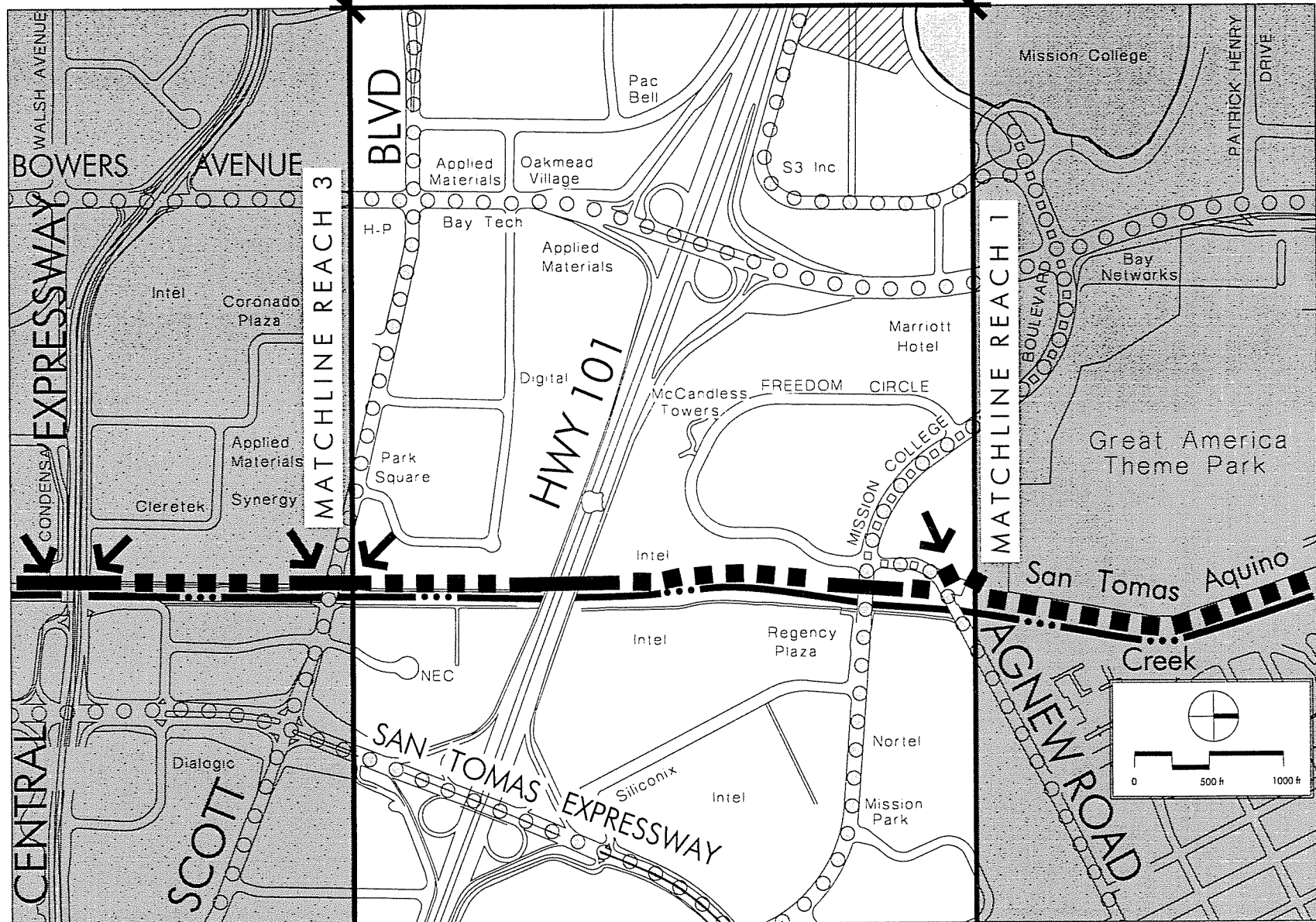
ENGINEERED STRUCTURES

UNDERPASSES

Storm events dictate trail closures upstream from Mission College Boulevard. The next three bridges that span the creek can be retrofitted to accommodate in-channel underpasses. These bridges include Mission College Boulevard, Highway 101 and Scott Boulevard. These



Reach 2 - Agnew Road to Scott Blvd. - Trail Length: .84 miles



Map 4 - Reach 2 - Agnew Road to Scott Boulevard - City of Santa Clara



SUMMARY OF REACH 2 TRAIL IMPROVEMENTS

- ◆ Engineered Structures
 - Underpasses
 - Highway 101
 - Mission College Boulevard
 - Scott Boulevard
- ◆ Access Points
 - Roadway Access
 - Agnew Road
 - Scott Boulevard
- ◆ Spur Trails
 - Mission College Boulevard to Mission College

Figure 11 - Summary of Reach 2 Trail Improvements

bridges will require unique engineering solutions and coordination with multiple agencies to accommodate in-channel underpasses at each of the locations. These bridges are built in a section of the creek that is lined with concrete. The concrete lining would be excavated to widen the flood control channel and reinstalled over a landing for the trail (See Figure 12). The trail elevation beneath each of these facilities would be higher than the downstream bridges, but must also be monitored for closure during winter storms.

The Highway 101 underpass is partially constructed. A landing for the trail exists below the road surface and ramps are present on both the north and south approaches. Since the existing ramps do not meet current

Americans with Disability Act Guidelines (ADA Guidelines), they will need to be regraded and lengthened to comply. Drainage is also poor in this location. A drainage solution must be incorporated into the Highway 101 trail landing and ramp design.

Scott Boulevard poses the unique challenge of incorporating the existing hydraulic jump into the design of the underpass. Here, the creek channel may need additional modifications to create a trail landing and maintain the function of the hydraulic jump.

ACCESS POINTS

Trail access is proposed at Agnew Road and Scott Boulevard. Agnew Road offers a route to Sun Microsystems campus located at Agnews West. Scott Boulevard provides a route to Hewlett-Packard and Intel as well as many other high technology firms located in the adjacent business parks.

SPUR TRAILS

A spur trail extends from Agnew Road to Mission College Boulevard to provide access to Mission College for the more than 10,250 students, faculty and staff.

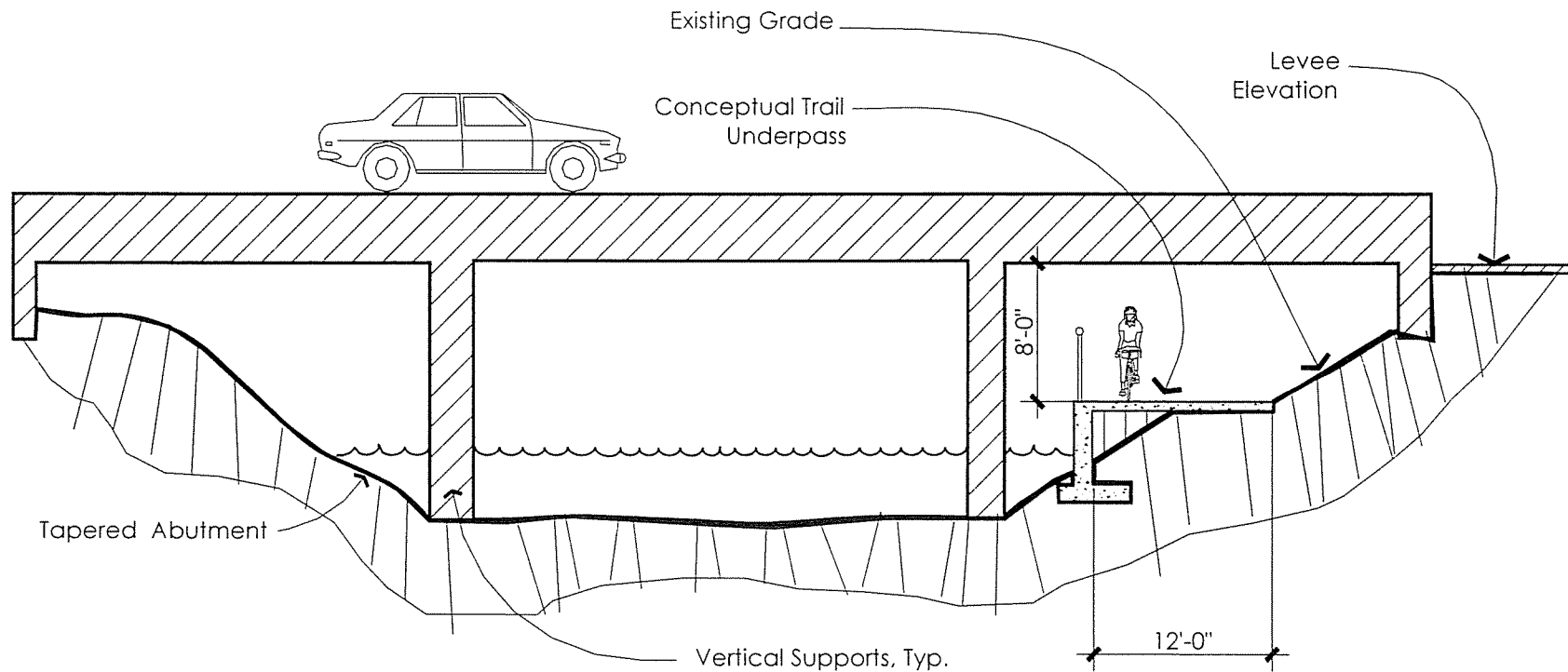


Figure 12 - Conceptual Engineering Design of Mission College Boulevard, Highway 101 and Scott Boulevard Underpasses.



TRAIL PLAN - REACH 3

REACH 3 - SCOTT BOULEVARD TO MONROE STREET

Reach 3 will extend from Scott Boulevard to Monroe Street within the City of Santa Clara. This 1.25 mile reach would continue along the creek corridor on levees owned by the Santa Clara Valley Water District. The trail alignment includes two underpasses crossing beneath roadways and two tunnels crossing beneath the CalTrain tracks and Monroe Street. Reach 3 also includes a pedestrian/bicycle bridge at the Monroe Street Staging Area to connect the trail on the west bank with parking facilities and trail amenities on the east bank. The pedestrian/bicycle bridge would complete the Scott Boulevard to Monroe Street segment of the trail (See Map 5 - Reach 3 - Scott Boulevard to Monroe Street).

POINTS OF INTEREST

The land use pattern changes at the CalTrain tracks in the City of Santa Clara. North of the CalTrain line the land use is primarily industrial. Residential land use dominates to the south of the CalTrain tracks. As a result, Reach 3 begins to include more family oriented points of interest and fewer job sites. The key to success for the trail lies in the ability of this corridor to provide an alternative transportation route that connects these land use patterns and offers trail users the opportunity to efficiently get from place to place on foot and by bicycle.

EMPLOYMENT CENTERS AND EDUCATIONAL CAMPUSES

Reach 3 provides access to Intel Corporation and the McCandless Business Park located north of CalTrain. It

POINTS OF INTEREST ALONG REACH 3

- ◆ Employment Centers
 - Intel Corporation
 - McCandless Business Park
- ◆ Educational Campuses
 - Bracher Elementary School
 - Wilcox High School
- ◆ Rail Stations
 - CalTrain

Figure 13 - Points of Interest along Reach 3

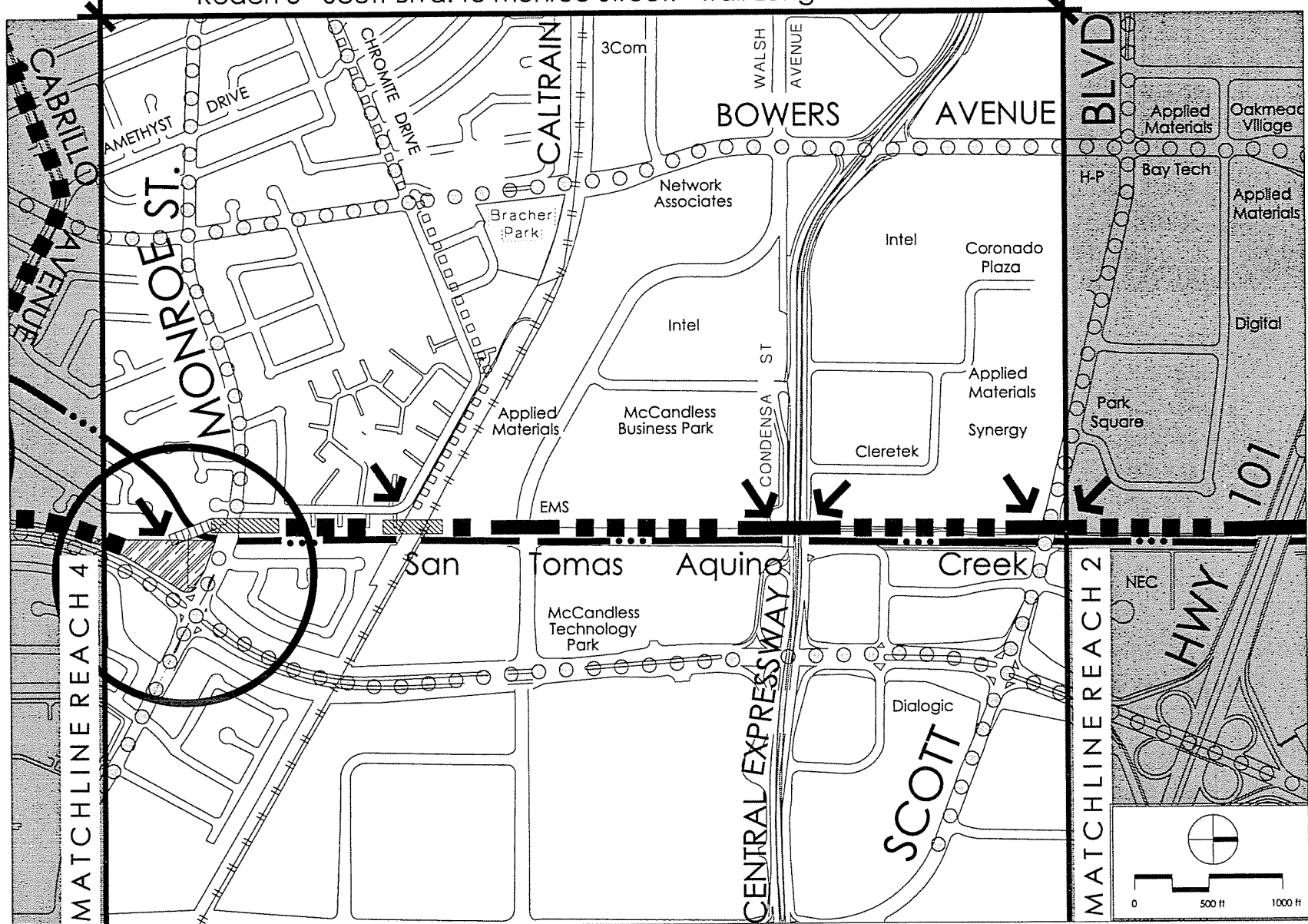
also provides access to Bracher Elementary School and Wilcox High School. Reach 3 is the first portion of the trail to provide a route from home to school (See Figure 13 - Points of Interest along Reach 3).

TRAIL ALIGNMENT

The Reach 3 trail alignment would continue along the west bank of the Santa Clara Valley Water District levee from Scott Boulevard to Monroe Street. Reach 3 would provide in-channel underpasses at Central Expressway and Walsh Avenue. A grade-separated crossing at CalTrain is proposed. This crossing may take the form of a tunnel or an in-channel cantilevered underpass. A tunnel is also proposed at Monroe Street to facilitate a safe crossing of this busy roadway. The proximity of the



Reach 3 - Scott Blvd. to Monroe Street. - Trail Length: 1.25 miles



Map 5 - Reach 3 - Scott Boulevard to Monroe Street - City of Santa Clara



SUMMARY OF REACH 3 TRAIL IMPROVEMENTS

- ◆ Engineered Structures
 - Underpasses
 - Central Expressway
 - Walsh Avenue
 - Pedestrian Bridges
 - Monroe Street Staging Area
 - Tunnels
 - CalTrain
 - Monroe Street
- ◆ Access Points
 - Roadway Access
 - Central Expressway
 - Scott Boulevard
 - South Drive
- ◆ Staging Areas
 - Monroe Street/County Roads and Airports Department Parcel
- ◆ Spur Trails
 - Lawrence Expressway/CalTrain Station

Figure 14 - Summary of Reach 3 Trail Improvements

trail to San Tomas Expressway makes a street crossing less desirable. The tunnel would provide access to the Monroe Street staging area, the terminus of Reach 3 (See Figure 14 - Summary of Reach 3 Trail Improvements).

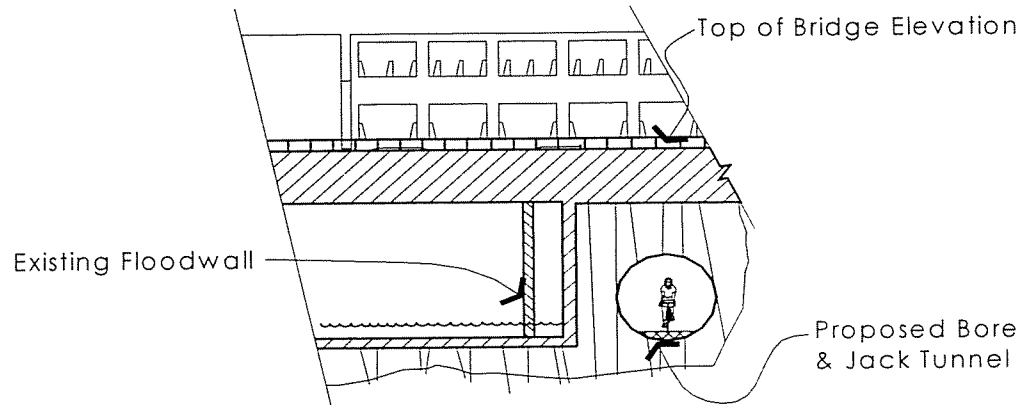
ENGINEERED STRUCTURES

UNDERPASSES

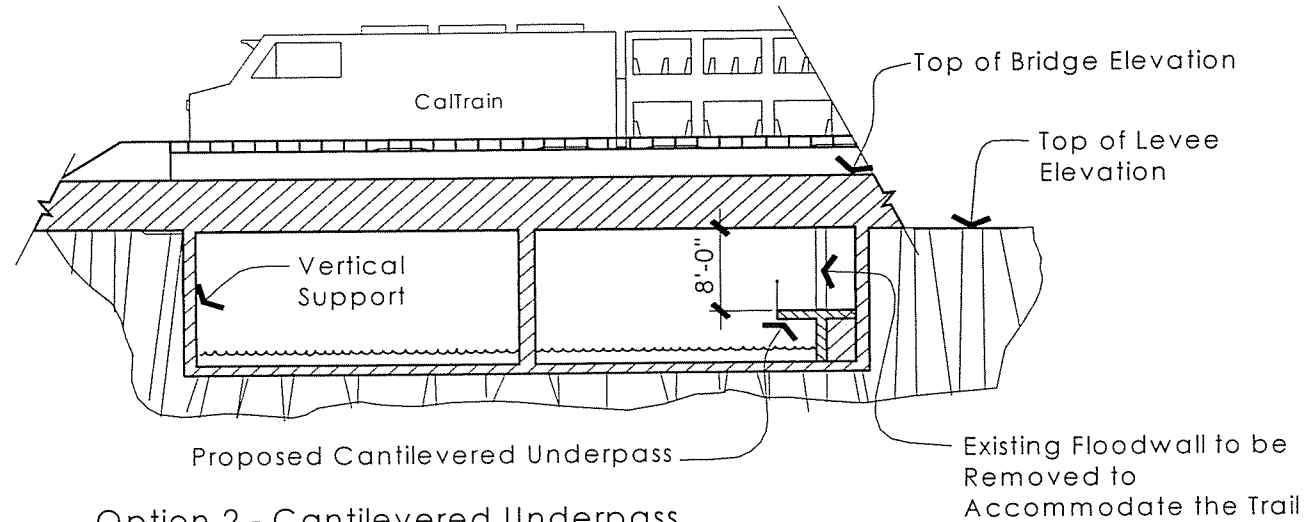
The Central Expressway and Walsh Avenue bridges in Reach 3 can be retrofitted to accommodate in-channel underpasses. These bridges are lined with concrete. The concrete lining can be excavated to widen the flood control channel at Central Expressway and Walsh Avenue. The trail elevation beneath Central Expressway and Walsh Avenue would be higher than the downstream bridges, but must also be monitored for closure during winter storms. The Central Expressway underpass is complicated by numerous utilities, dual bridges that accommodate north and south bound expressway traffic and a third vehicular bridge on Condensa Street that parallels the expressway and provides access to McCandless Business Park. The length of this underpass will be considerable due to the multiple crossings within the right-of-way of these three bridges. Fortunately, these three bridges are placed sufficiently far apart so that the trail underpass will receive much natural light. This light will aid navigation and provide a sense of security to trail users passing beneath the expressway.

TUNNELS - CALTRAIN

The Public Utilities Commission (PUC) would require a grade-separated crossing of the CalTrain tracks. A tunnel parallel to the creek channel would provide the best solution to this crossing (See Figure 15). However, it may be possible to construct an in-channel, cantilevered trail landing by modifying an existing flood control wall beneath the CalTrain tracks. This option



Option 1 - Bore & Jack Tunnel



Option 2 - Cantilevered Underpass

Figure 15 - Grade-Separated Crossing Options at CalTrain.



TRAIL PLAN - REACH 3

would require incorporation of a hydraulic jump into the trail landing. Both of these options should receive further consideration during the preparation of construction documents. This crossing is estimated to be the single most expensive feature of the trail. However, this crossing is an important link between residential neighborhoods to the south and businesses and recreational opportunities to the north. No designated on-street bicycle lane or route is available in this area. Therefore, the bicycle commute connections can only be secured through the construction of a grade-separated crossing of the CalTrain tracks.

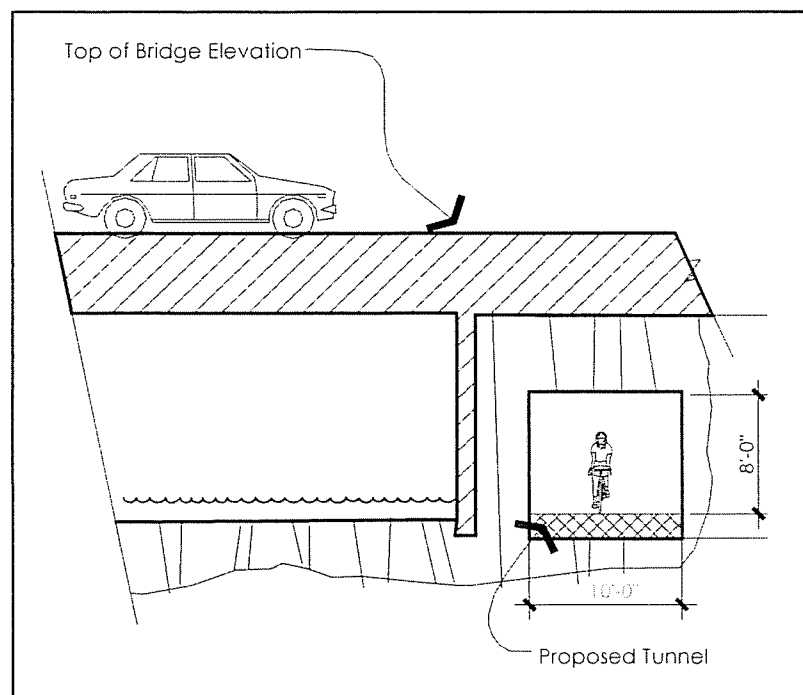


Figure 16 - Conceptual Engineering Design of the Monroe Street Tunnel.

TUNNELS - MONROE STREET

At Monroe Street, there is no space to expand the flood control channel and create a landing for the trail. A tunnel parallel to the creek channel passing beneath the Monroe Street is proposed. The tunnel would daylight just south of Monroe Street on the west bank of the creek. At this point, a pedestrian/bicycle bridge would connect trail users to the staging area located at the corner of San Tomas Expressway and Monroe Street on the east bank of the creek (See Figure 16).

ACCESS POINTS

Bicycle and pedestrian connections to the roadway system would be provided at Scott Boulevard, Central Expressway and South Drive. The connection to Central Expressway would allow trail users to link with destinations to the east and west. South Drive would offer trail users a route to the CalTrain Station located at Lawrence Expressway. This access is intended to enhance intermodal commuting.

STAGING AREAS

A trail staging area is proposed along the east bank of the creek at Monroe Street on property owned by the Santa Clara County Roads and Airports Department. A pedestrian/bicycle bridge would be constructed at this location to bring trail users across the creek from the Monroe Street tunnel to the staging area. This is the only staging area to be built specifically for the trail. All of the other staging areas identified in this Master Plan would be shared facilities. The Monroe Street staging area may include parking, restrooms, drinking fountains,



native plant landscaping, lighting, signage, etc. (See Figure 17). The staging area must be designed in coordination with the County Roads and Airports Department. This agency plans to upgrade San Tomas Expressway. These plans may include an interchange at the existing Monroe Street intersection. The staging area and interchange must be designed in concert so

that the both types of transportation needs are included in the Expressway plans.

SPUR TRAILS

A spur trail is proposed to the Lawrence Expressway CalTrain Station. The spur trail would follow South Drive to Chromite Drive to reach Monroe Street. Bicyclists traveling to the CalTrain Station would head west on Monroe Street to reach Monticello Way and Agate Drive. The CalTrain Station is located off French Street. This roadway crosses beneath Lawrence Expressway which is elevated in this area.

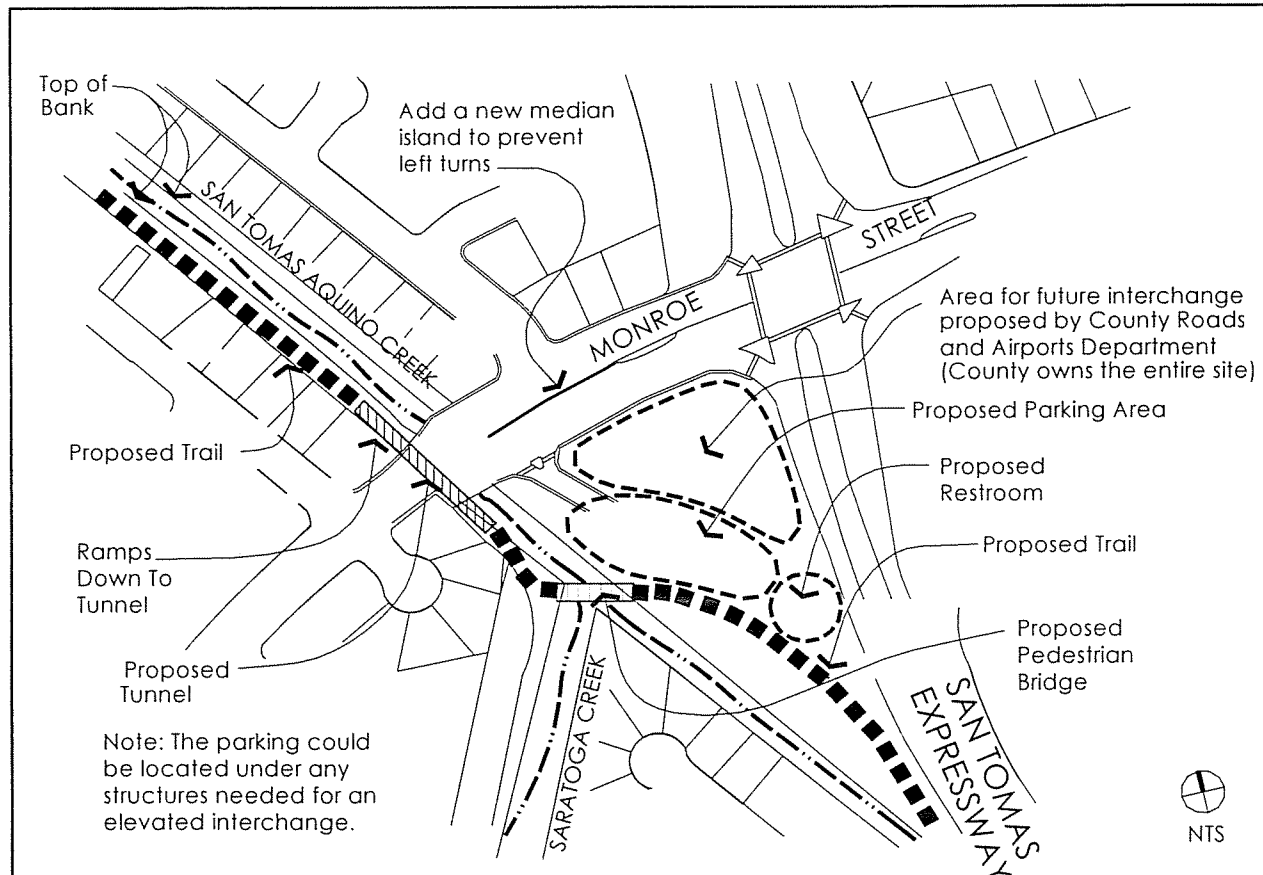


Figure 17 - Monroe Street Staging Area Design Diagram.



REACH 4 -

MONROE STREET TO PRUNERIDGE AVENUE

Reach 4 will extend from the corner of the Monroe Street staging area to the intersection of Pomeroy Avenue and Pruneridge Avenue. This 4.17 mile segment of the trail would be aligned along streets in the City of Santa Clara. The proposed alignment would pass through six existing signalized intersections and include a short segment of trail parallel to San Tomas Expressway. Reach 4 would terminate at the intersection of Pomeroy Avenue and Pruneridge Avenue (See Map 6 - Reach 4 - Monroe Street to Pruneridge Avenue).

POINTS OF INTEREST

EMPLOYMENT CENTERS AND RETAIL DISTRICTS

The Kaiser Permanente Medical Center located on Kiely Boulevard and the future Kaiser Permanente offices to be constructed along Lawrence Expressway will be accessed via short spur trails. Reach 4 also provides access to a retail district. Many stores along El Camino Real will provide shopping destinations for trail users.

EDUCATIONAL CAMPUSES AND RECREATION FACILITIES

Six schools and four parks are located on the trail or within 1/4 mile of the trail. Bowers Elementary, Millikin Elementary, Pomeroy Elementary, Sutter Elementary, Cabrillo Middle and Santa Clara High Schools can be accessed via Reach 4. The proximity of these schools to the creek corridor allows teachers to conduct environmental education activities in their own backyard.

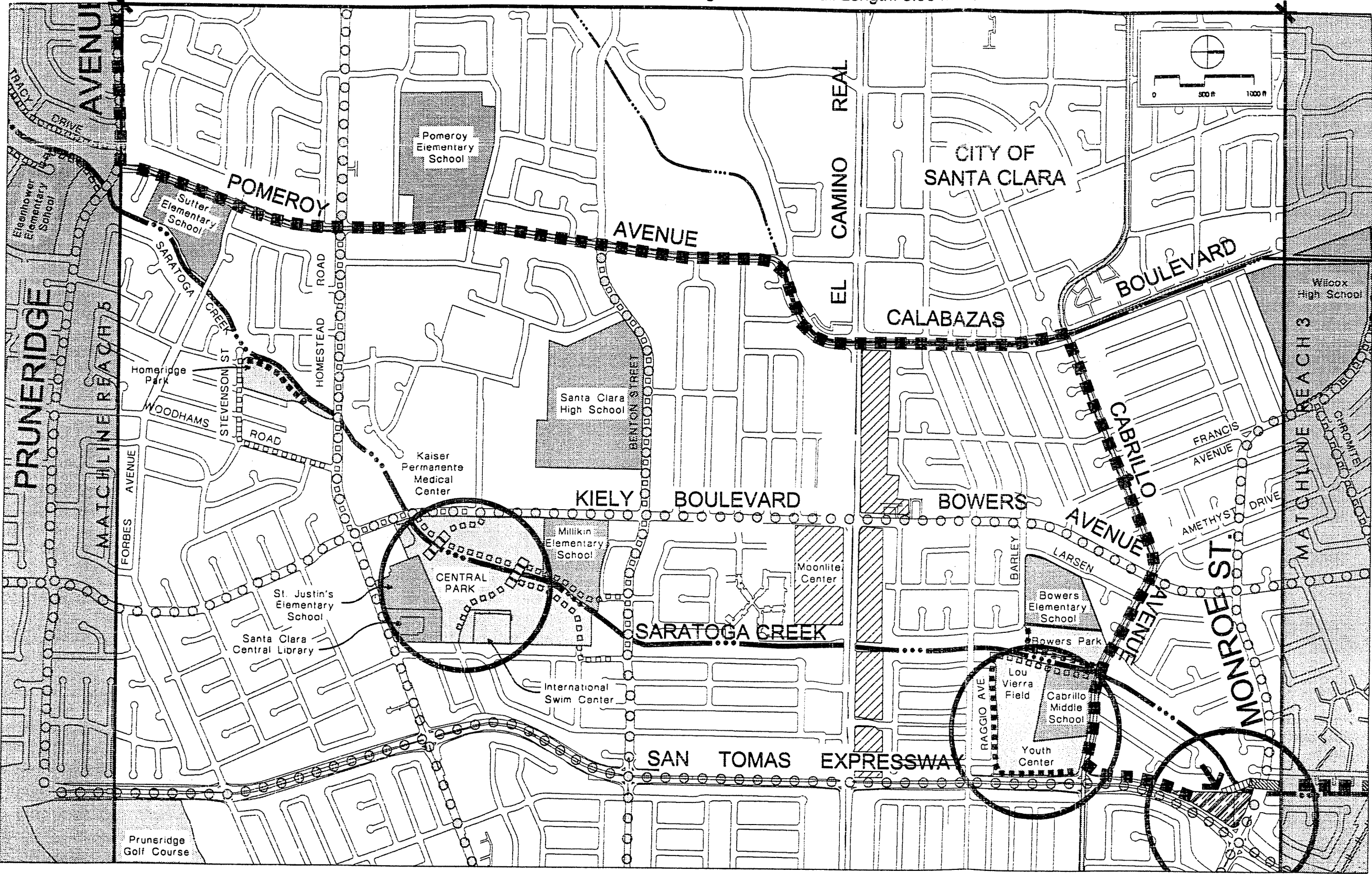
POINTS OF INTEREST ALONG REACH 4

- ◆ Employment Centers
 - Kaiser Permanente Medical Center
- ◆ Retail Districts
 - El Camino Real
- ◆ Educational Campuses
 - Bowers Elementary School
 - Cabrillo Middle School
 - Millikin Elementary School
 - Pomeroy Elementary School
 - Santa Clara High School
 - Sutter Elementary School
- ◆ Recreational Facilities
 - Bowers Park
 - Central Park
 - Homeridge Park
 - International Swim Center
 - Lou Vierra Field
 - Santa Clara Youth Center

Figure 18 - Points of Interest along Reach 4



Reach 4 - Monroe Street to Pruneridge Avenue - Trail Length: 3.95 miles



Map 6 - Reach 4 - Monroe Street to Pruneridge Avenue - City of Santa Clara



SUMMARY OF REACH 4 TRAIL IMPROVEMENTS

- ◆ Engineered Structures
 - Pedestrian Bridges
 - Central Park - 2 Existing
 - At-Grade Street Crossings
 - Bowers Avenue
 - Cabrillo Avenue
 - Calabazas Boulevard
 - El Camino Real
 - Pomeroy Avenue
 - Pruneridge Avenue
- ◆ Access Points
 - Recreational Access
 - Bowers Park
 - Santa Clara Youth Center
 - Roadway Access
 - Cabrillo Avenue
- ◆ Staging Areas
 - Central Park - Existing
 - Santa Clara Youth Center - Existing
- ◆ Spur Trails
 - Bowers Park to Saratoga Creek
 - Benton Street to Central Park
 - Woodhams Road to Homeridge Park
 - Homestead Road to Central Park
 - Santa Clara Youth Center to Lou Vierra Field

Figure 19 - Summary of Reach 4 Trail Improvements

Central Park in Santa Clara which includes the International Swim Center and the Santa Clara Central Library can be reached from spur trails on Benton Street and Homestead Road. The Santa Clara Youth Center is located directly on the trail at Cabrillo Avenue. Several neighborhood parks including Bowers Park, Lou Vierra Field and Homeridge Park are also situated along Reach 4 (See Figure 18 - Points of Interest along Reach 4).

TRAIL ALIGNMENT

The trail would extend south from the Monroe Street staging area to Cabrillo Avenue on a Class I bicycle path

parallel to San Tomas Expressway. This .25 mile Class I bicycle path would connect to Class II bicycle lanes on Cabrillo Avenue and begin a 3.50 mile section of the trail along city streets (See Figure 19 - Summary of Reach 4 Trail Improvements).

The trail alignment from the Monroe Street staging area would extend through the Santa Clara County Roads and Airports Department right-of-way located adjacent to San Tomas Expressway. This shoulder has been retained for the expansion of San Tomas Expressway. The trail alignment would require use of a portion of this public property. Should access be provided by the Roads and Airports



Department, the trail would exit the property just upstream from the confluence of San Tomas Aquino and Saratoga Creeks. In this location, the alignment would squeeze between the existing sound wall and shoulder of the expressway. The trail would be completely separated from automobile traffic. A security barrier would be required between the trail and the expressway (See Figure 20).

This piece of County property is critical to trail development and operations for three reasons. First, this alignment provides a direct connection to the Youth Center and Lou Vierra Field that are located on Cabrillo

Avenue. Second, the alignment takes advantage of the layout of the roadway and existing signalized intersection at the corner of San Tomas Expressway and Cabrillo Avenue to encourage trail users to follow the rules of the road. Third, Cabrillo Avenue is a relatively low traffic volume street which maintains the right-of-way at most intersections. Thus, the short Class I bicycle path extension to Cabrillo Avenue dramatically improves the circulation and security of trail users.

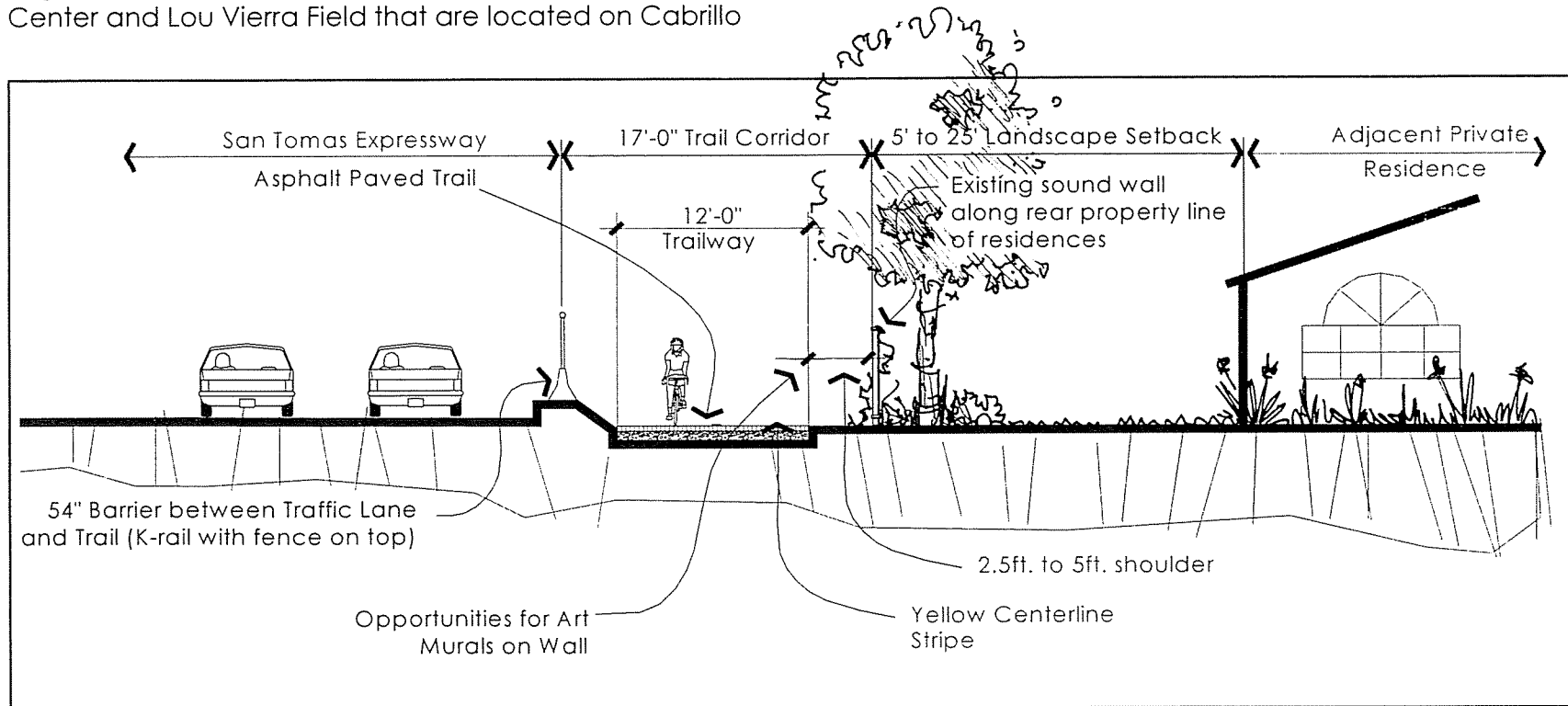


Figure 20 - Conceptual Design Solution for the Class I Bikeway adjacent to San Tomas Expressway.



TRAIL PLAN - REACH 4

ON-STREET ROUTE

Saratoga Creek between Monroe Street and Pruneridge Avenue can not accommodate a trail alignment. This section of the creek was widened by the Santa Clara Valley Water District for flood control. This widening of the creek channel removed much of the historic creek bank. The banks were stabilized after the excavation of the creek channel with a stepped gabion lining. Planters were interspersed throughout this rock lining to hold replacement native vegetation.

As a result of these flood control improvements, the top-of-bank is inadequate to accommodate a trail. Throughout most of this area, less than 5 feet remains between backyard neighborhood fences and the edge of the creek channel. The few exceptions to this limited land availability are found in areas where public parks or schools abut the creek corridor. In these areas, spur trails are proposed to connect these public facilities to the trail. Replanting that was undertaken as part of this flood control project constitutes habitat mitigation. Therefore, any additional development in the area would likely require double mitigation at a minimum. These factors forced exploration of on-street alignments to continue the trail south toward Prospect Road.

At Cabrillo Avenue, the alignment would turn west and leave the creek corridor for city streets. The on-street route would extend along Cabrillo Avenue, cross a major intersection at Bowers Avenue and connect to bicycle lanes on Calabazas Boulevard. This roadway has a double-barrel design with north and south traffic lanes located on opposite banks of Calabazas Creek. The road is lined with

mature street trees and Calabazas Creek can be glimpsed from the bicycle lanes and sidewalks. Calabazas Boulevard meets El Camino Real at a signalized intersection that controls cross traffic. Shortly after crossing El Camino Real, Calabazas Boulevard intersects Pomeroy Avenue.

Automobile traffic on Calabazas Boulevard is controlled by a stop sign. However, traffic on Pomeroy Avenue does not stop and must be controlled to allow passage of pedestrians and bicyclists. Three options for controlling this traffic are included as mitigation in the San Tomas Aquino/Saratoga Creek Trail Initial Study document. From this junction, trail users would continue south on Pomeroy Avenue using bicycle lanes and sidewalks. Pomeroy Avenue is designated as a beginner bicycle lane by the City of Santa Clara. The Reach 4 on-street trail alignment would terminate at the intersection of Pomeroy Avenue and Pruneridge Avenue.

ACCESS POINTS

Trail access is proposed at two park and recreation facilities located directly along Reach 4. The Santa Clara Youth Center and Bowers Park provide access to the trail along Cabrillo Avenue. The intersection of the Class I trail with Cabrillo Avenue provides roadway access to a bicycle lane that has been designated a beginner route. This connection facilitates bicycle travel in the east-west direction.



STAGING AREAS

Central Park and the Santa Clara Youth Center would serve as staging areas for Reach 4 of the trail. Central Park is located a short distance from the trail and is accessed at both Benton Street and Homestead Road. Spur trail routes exiting the park from both of these city streets extend to the trail alignment located on Pomeroy Avenue. The Santa Clara Youth Center is located directly on the trail at the corner of San Tomas Expressway and Cabrillo Avenue.

SPUR TRAILS

Five spur trails are located within Reach 4. Benton Street and Homestead Road each provide a spur trail connection to Central Park which functions as staging area. A proposed spur trail from the Santa Clara Youth Center staging area will offer a route to Lou Vierra Field. A proposed spur trail located in Bowers Park could be aligned directly adjacent Saratoga Creek to offer trail users views of creek habitat. A spur trail follows Woodhams Road and Stevenson Street to reach Homeridge Park which is also located along Saratoga Creek. These five spur trails provide an opportunity for pedestrians and bicyclists to leave the on-street route and to visit Saratoga Creek.



REACH 5

PRUNERIDGE AVENUE TO BOLLINGER ROAD

Reach 5 will extend from the corner of Pomeroy Avenue and Pruneridge Avenue to Bollinger Road. This 2.16 mile segment of the trail will be aligned on streets in the cities of Santa Clara and Cupertino and along a wooded stretch of Saratoga Creek within the City of San Jose. The proposed alignment would include three existing signalized intersections and a short segment of Class I trail parallel to Lawrence Expressway and Saratoga Creek. A section of this Class I trail has been constructed and currently provides Rancho Rinconada residents with trail access. The reach would terminate at the intersection of Bollinger Road and Lawrence Expressway (See Map 7 - Reach 5 - Pruneridge Avenue to Bollinger Road).

POINTS OF INTEREST

EMPLOYMENT CENTERS AND RETAIL DISTRICTS

Hewlett-Packard and Compaq Computers are the large employers located along Reach 5. These two high technology companies employ several thousand people. Vallco Fashion Park, Stevens Creek Central and Villa Center offer shopping opportunities for trail users.

EDUCATIONAL CAMPUSES AND RECREATIONAL FACILITIES

Seven schools are located on the trail or within 1/4 mile of the trail. Cupertino High, DeVargas Elementary, Eisenhower Elementary, Hyde Junior High, Mitty High School, Queen of Apostles and Sedgewick Elementary Schools can be accessed via Reach 5. Five neighborhood

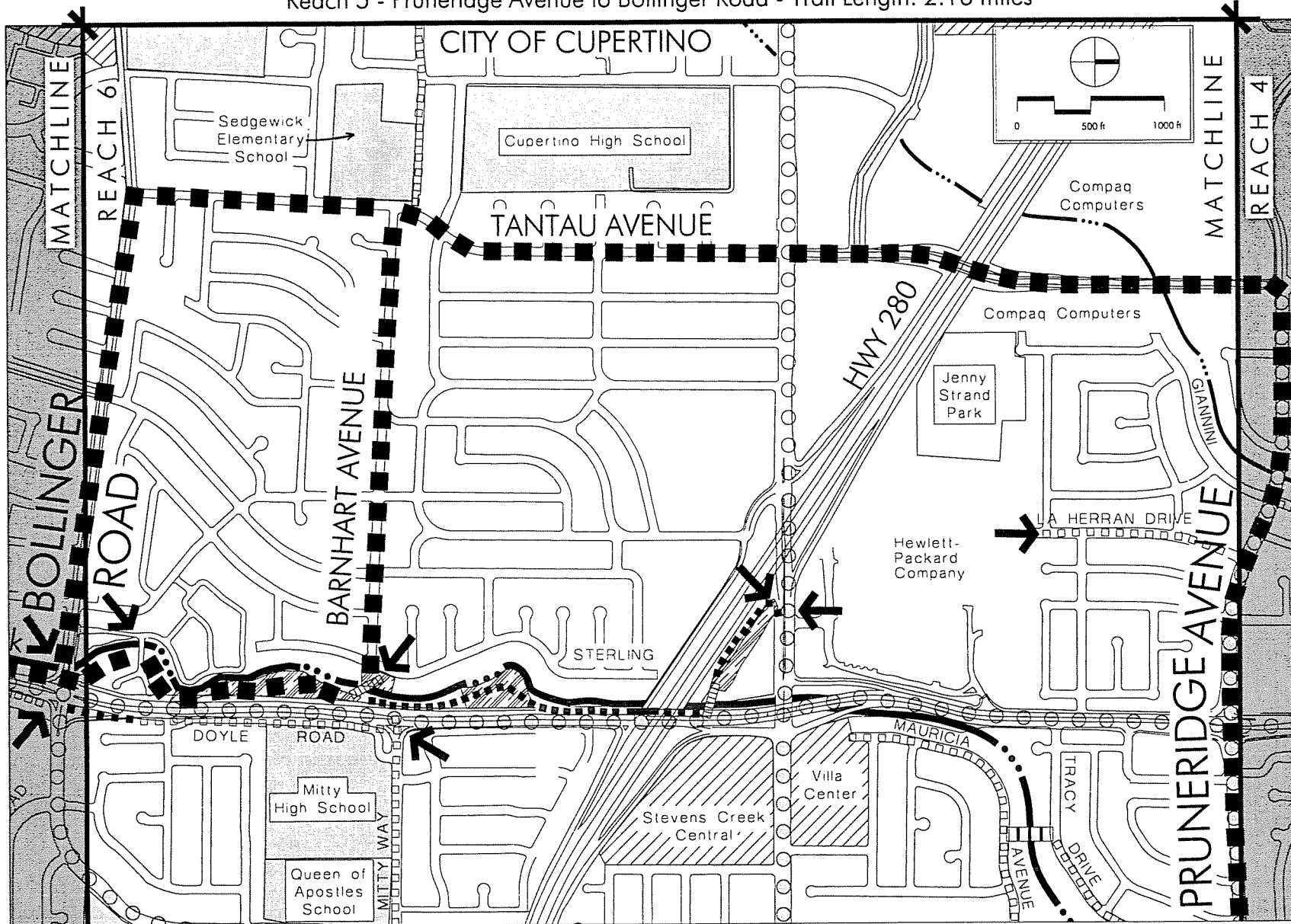
POINTS OF INTEREST ALONG REACH 5

- ◆ Employment Centers
 - Hewlett-Packard Company
 - Compaq Computers
- ◆ Retail Districts
 - Stevens Creek Central
 - Vallco Fashion Park
 - Villa Center
- ◆ Educational Campuses
 - Cupertino High School
 - DeVargas Elementary School
 - Eisenhower Elementary School
 - Hyde Junior High School
 - Mitty High School
 - Queen of Apostles School
 - Sedgewick Elementary School
- ◆ Recreational Facilities
 - Creekside Park
 - Jenny Strand Park
 - John Mise Park
 - Maywood Park
 - Rinconada Swim Center

Figure 21 - Points of Interest along Reach 5



Reach 5 - Pruneridge Avenue to Bollinger Road - Trail Length: 2.16 miles



Map 7 - Reach 5 - Pruneridge Avenue to Bollinger Road - City of Cupertino and City of San Jose



SUMMARY OF REACH 5 TRAIL IMPROVEMENTS

◆ Engineered Structures

- Underpasses
 - Highway 280 On-Ramp
- Pedestrian Bridges
 - Barnhart/San Jose Water Company Parcel
 - 5300 Stevens Creek Boulevard
- At-Grade Street Crossings
 - Bollinger Road
 - Stevens Creek Boulevard

◆ Access Points

- Corporate Access
 - Hewlett-Packard Company
- Neighborhood Access
 - Barnhart Avenue

- Barrington Bridge
- Mitty Way
- Roadway Access
 - Bollinger Road
 - Mitty Way
 - Stevens Creek Boulevard

◆ Spur Trails

- Barnhart Avenue to Creekside Park
- La Herran Drive to Hewlett-Packard
- Mauricia Avenue to Villa Center
- Mitty Way to Mitty High School
- Stevens Creek Boulevard to Hewlett-Packard

Figure 22 - Summary of Reach 5 Trail Improvements

parks including Creekside Park, Jenny Strand Park, John Mise Park, Maywood Park and Rancho Rinconada Swim Center are also situated along Reach 5 (See Figure 21 - Points of Interest along Reach 5).

TRAIL ALIGNMENT

Reach 5 would begin at the intersection of Pomeroy Avenue and Pruneridge Avenue and extend to bicycle lanes on Bollinger Road which forms the city limit between San Jose and Cupertino. Reach 5 would extend west along Pruneridge Avenue to the intersection of Tantau

Avenue with Pruneridge Avenue. The alignment takes advantage of the Tantau Avenue overpass to cross Highway 280. After crossing Highway 280, the trail alignment would either return to the creek corridor via Barnhart Avenue or extend through the Rancho Rinconada neighborhood on city streets. These two alignment options, the creek alignment and the on-street route, are retained for further consideration by the City of Cupertino, implementing agency for Reach 5. These alignment options include a variety of trail features and management elements (See Map 7 - Reach 5 Trail Alignment - Pruneridge Avenue to Bollinger Road).



CREEK ALIGNMENT

The creek alignment parallels Saratoga Creek and Lawrence Expressway from Barnhart Avenue to Bollinger Road. In this alignment scenario, the trail extends east on Barnhart Avenue to return to the creek corridor. Barnhart Avenue dead ends at the creek at Sterling Boulevard. At this junction, a San Jose Water Company parcel provides a location for installing a pedestrian/bicycle bridge to connect the west bank to the east bank of Saratoga Creek. The bridge will provide access to Santa Clara County Roads and Airports Department land located along Lawrence Expressway. Access through the San Jose Water Company parcel is required for the placement of the pedestrian/bicycle bridge. Access through the Santa Clara County Roads and Airports property must be secured for the trail.

The majority of public lands and public trail easements between Stevens Creek Boulevard and Bollinger Road are located on the east bank of the creek corridor. The creek alignment would extend south through these public lands before connecting to an existing segment of the trail that traverses a public trail easement located in the Barrington Bridge subdivision. This subdivision is located just north of Bollinger Road. A 22-foot wide public trail easement that extends south from Bollinger Road to just beyond the end of the subdivision at Lot 24 was deeded to the County of Santa Clara in 1989. A Class I trail was constructed with the development of the subdivision. This segment of trail was installed on the southern most portion of this easement from Bollinger Road to Barrington Bridge Lane. The trail easement continues south across Barrington Bridge to Chelmsford Drive. The trail easement extends

north along the Chelmsford Drive to the end of the subdivision. At the bend in the road, the easement extends an additional approximately 125 feet along the west bank of the creek and adjacent to Lot 24.

The creek alignment, preferred by the Streamside Park Committee, also extends through the Barrington Bridge subdivision. It is entirely confined to the east bank of the creek. This trail alignment runs along the constructed segment of trail located on the east bank of the creek from Bollinger Road to just beyond Barrington Bridge Lane. It then extends north through Santa Clara Valley Water District and County of Santa Clara Roads and Airports property on the east bank of the creek to just opposite Barnhart Avenue. The east bank alignment eliminates the need to use Chelmsford Drive as a bicycle route. This alignment uses a portion of the dedicated trail easement and publicly owned land.

This Class I trail parallels Saratoga Creek the entire route (See Map 7 - Reach 5 Trail Alignment - Pruneridge Avenue to Bollinger Road). The creek alignment may require the use of gates at the north and south ends of the subdivision. Gates would be installed as necessary to assist the neighborhood with crime control. Gates would be locked each evening and reopened each morning. The creek alignment also calls for improvements to the Bollinger Road/Lawrence Expressway intersection. These detailed roadway improvements are identified in the San Tomas Aquino/Saratoga Creek Trail Initial Study document. These modifications could be implemented immediately or in conjunction with the construction of Reach 5.

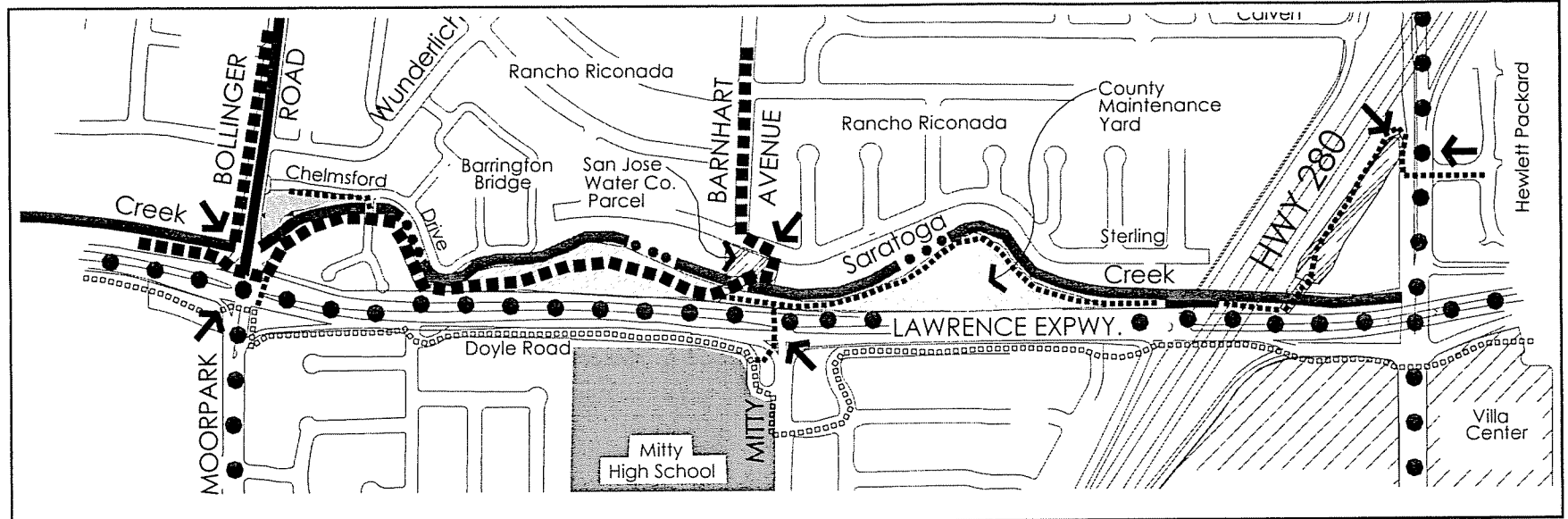


Figure 23 - Trail Alignment through County of Santa Clara Roads and Airports Department property adjacent to Lawrence Expressway.

ON-STREET ROUTE

This alignment relinquishes the concept of a streamside trail from Barnhart Avenue to Bollinger Road. The on-street route would continue south along a bicycle route on Tantau Avenue from Stevens Creek Boulevard to Bollinger Road. A signalized intersection exists at Tantau Avenue and Bollinger Road. At this intersection, the trail would turn east and traverse existing bicycle lanes on Bollinger Road until rejoining the creek corridor at the intersection of Bollinger Road with Lawrence Expressway. This alignment would require the installation of sidewalks on Bollinger Road from Tantau Avenue to Lawrence Expressway to accommodate pedestrian traffic. Currently, incomplete sidewalks exist in this area. This alignment uses a publicly owned street right-of-way. It is an entirely on-street route (See Map 7 - Reach 5 - Pruneridge Ave. to Bollinger Rd.).

ENGINEERED STRUCTURES

UNDERPASSES AND PEDESTRIAN BRIDGES

A spur trail extending from the Barnhart Avenue pedestrian/bicycle bridge north to the Hewlett-Packard Company, Santa Clara Division located on Stevens Creek Boulevard is proposed. This route would serve two functions. First, it would provide employees living south of Stevens Creek Boulevard with a direct bicycle and pedestrian route to work. Without this spur trail, employees would be forced to use the Tantau Avenue overpass which is a much greater distance from the Hewlett-Packard site. Second, the spur trail would provide direct access to Stevens Creek Boulevard for residents wishing to shop at local stores.



The spur trail would extend north from Barnhart Avenue to pass beneath the on-ramp to north bound Highway 280. The use of this underpass would be very seasonal and open about six months out of the year. However, these six months also coincide with the time of the year when the greatest numbers of individuals take advantage of alternative commute opportunities. The modifications to the on-ramp would require approval from both the California Department of Transportation (Caltrans) and Santa Clara County Roads and Airports Department.

After passing beneath the Highway 280 on-ramp, the trail would cross the creek on a proposed pedestrian/bicycle bridge and extend through Caltrans right-of-way. The trail would be constructed in the Highway 280 right-of-way adjacent to the building located on the corner of Stevens Creek Boulevard and Lawrence Expressway. The right-of-way is located at the toe of the earthen slope that elevates the Highway 280 overpass which crosses above Lawrence Expressway. This significant grade change between the Highway 280 roadway and trail alignment would provide additional security to trail users. The Caltrans right-of-way is needed to develop a Class I trail to Stevens Creek Boulevard.

AT-GRADE STREET CROSSINGS

The existing signalized intersection at Stevens Creek Boulevard would provide an at-grade street crossing to the Hewlett-Packard site. This intersection has crosswalks on all four legs and good visibility from all directions. During the development of construction documents, the intersection should be evaluated for signal detection sensitive to bicycles and the signal timing checked for adequacy for pedestrians and bicyclists.

ACCESS POINTS

Three neighborhoods will gain direct access to the trail through conveniently located access points. The Barnhart Avenue pedestrian/bicycle bridge will connect Rancho Rinconda residents to the trail. The completed segment of trail in the Barrington Bridge subdivision currently provides trail access. An access point proposed at Mitty Way would serve two functions. It would afford a connection to both Mitty High School and Queen of Apostles School and link the neighborhoods to the east of Lawrence Expressway to the trail.

Roadway access will be provided at Stevens Creek Boulevard to facilitate shopping for pedestrian and bicyclists. Mitty Way will serve both the neighborhoods and schools to the east and provide access to John Mise Park.

SPUR TRAILS

Five spur trails are proposed within Reach 5. Four of these spur trails follow existing city streets and provide connections to Hewlett-Packard Company, Creekside Park, Villa Center, Mitty High School, Queen of Apostles School and John Mise Park. The fifth spur trail provides a grade-separated crossing of the Highway 280 on-ramp to provide a direct route to the Hewlett-Packard Company, Santa Clara Division for employees traveling from the residential neighborhoods to the south.



REACH 6 - BOLLINGER ROAD TO PROSPECT ROAD

Reach 6 will extend from Bollinger Road to Prospect Road. This 2.32 mile segment of the trail would be aligned along streets and along several wooded stretches of Saratoga Creek in the City of San Jose. The proposed alignment would include one existing signalized intersection, a pedestrian/bicycle bridge and a segment of Class I trail parallel to Lawrence Expressway and Saratoga Creek. Murdock Park and Prospect High School will serve as staging areas. A spur trail provides neighborhood access at English Drive to a soft surface pedestrian only trail that extends through an oak woodland located adjacent to Saratoga Creek (See Map 8 - Reach 6 - Bollinger Road to Prospect Road).

POINTS OF INTEREST

RETAIL DISTRICTS

El Paseo, Westgate and Westgate West Shopping Centers offer convenient shopping opportunities for trail users. These shopping malls will be accessed from Prospect Road and neighborhood streets via the Doyle Drive spur trail. The many shops, restaurants and movie theaters will make these districts key destinations for trail users.

EDUCATIONAL CAMPUSES AND RECREATIONAL FACILITIES

Five schools are located within 1/4 mile of Reach 6. These include Dilworth Elementary, Doyle Elementary, Lynbrook High, Miller Junior High and Prospect High Schools. Three parks including Murdock Park, Rainbow Park and Saratoga Creek Park are near Reach 6. This last reach of the trail will provide numerous opportunities for walking

POINTS OF INTEREST ALONG REACH 6

- ◆ Retail Districts
 - El Paseo Shopping Center
 - Westgate Shopping Center
 - Westgate West Shopping Center
- ◆ Educational Campuses
 - Dilworth Elementary School
 - Doyle Elementary School
 - Lynbrook High School
 - Miller Junior High School
 - Prospect High School
- ◆ Recreational Facilities
 - Murdock Park
 - Saratoga Creek Park
 - Rainbow Park

Figure 24 - Points of Interest along Reach 6

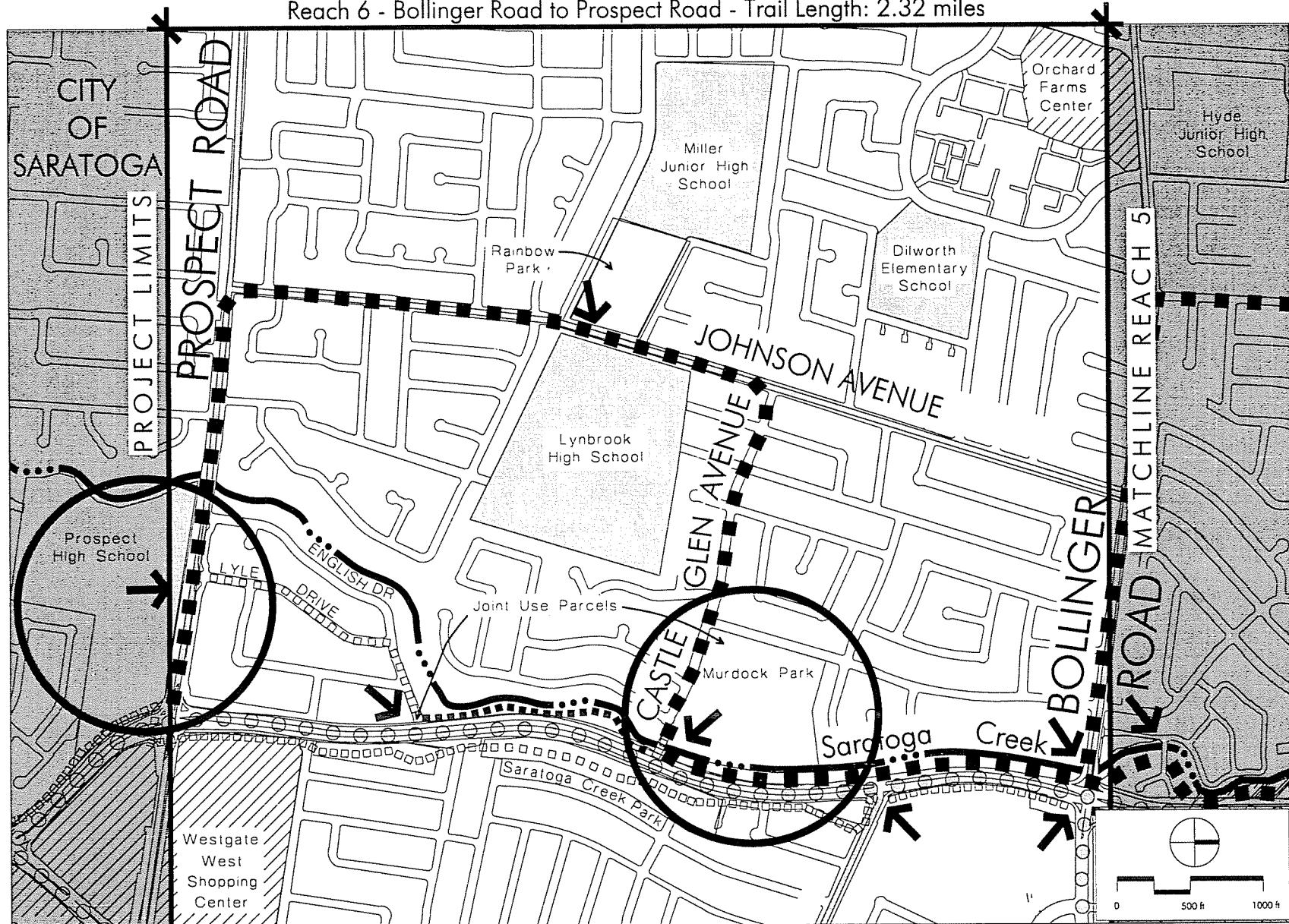
and bicycling to school and to the recreational opportunities available in the city parks (See Figure 24 - Points of Interest along Reach 6).

TRAIL ALIGNMENT

Reach 6 would extend south from Bollinger Road to Prospect Road in the City of San Jose. The trail would parallel Saratoga Creek adjacent to Lawrence



Reach 6 - Bollinger Road to Prospect Road - Trail Length: 2.32 miles



Map 8 - Reach 6 - Bollinger Road to Prospect Road - City of San Jose



SUMMARY OF REACH 6 TRAIL IMPROVEMENTS

- ◆ Engineered Structures
 - Pedestrian Bridges
 - Murdock Park - Replacement
 - At-Grade Street Crossings
 - Doyle Road
 - Prospect Road
- ◆ Access Points
 - Recreational Access
 - Murdock Park
 - Rainbow Park
 - Neighborhood Access
 - Doyle Street
 - English Drive
 - Roadway Access
 - Prospect Road
- ◆ Staging Areas
 - Murdock Park
 - Prospect High School
- ◆ Spur Trails
 - Doyle Drive to Saratoga Creek Park
 - Saratoga Creek to English Drive Cul-de-sac

Figure 25 - Summary of Reach 6 Trail Improvements

Expressway before exiting to city streets at Murdock Park. The trail would terminate by connecting to bicycle lanes and sidewalks along Prospect Road (See Figure 25 - Summary of Reach 6 Trail Improvements).

PEDESTRIAN BRIDGES

Once through the signalized intersection at Bollinger Road, the trail would continue along the east bank of Saratoga Creek until reaching Murdock Park. Adequate top-of-bank is available on the east bank in most areas. However, the existing modified creek bank must be repaired in four locations to meet the minimum desired trail width. The trail would cross the creek at Murdock Park at the location of an existing pedestrian/bicycle bridge (See Illustration 2 - Pedestrian Bridge at Murdock Park). This narrow bridge does not meet the current Americans with Disabilities Act Guidelines and would need to be replaced to accommodate additional uses (ADA Guidelines, 1994). Once across the new pedestrian/bicycle bridge at Murdock Park, the trail would return to city streets.

ON-STREET ROUTE

Reach 6 will extend through the City of San Jose's Murdock Park to Castle Glen Avenue. The trail would follow Castle Glen Avenue west to Johnson Avenue and then extend south to Prospect Road. A signalized intersection at Johnson Avenue and Prospect Road connects trail users to bicycle lanes and sidewalks on Prospect Road. Prospect Road offers trail users the opportunity to extend their travel in a westerly direction toward residential neighborhoods and in an easterly direction toward El Paseo, Westgate and Westgate West Shopping Centers.

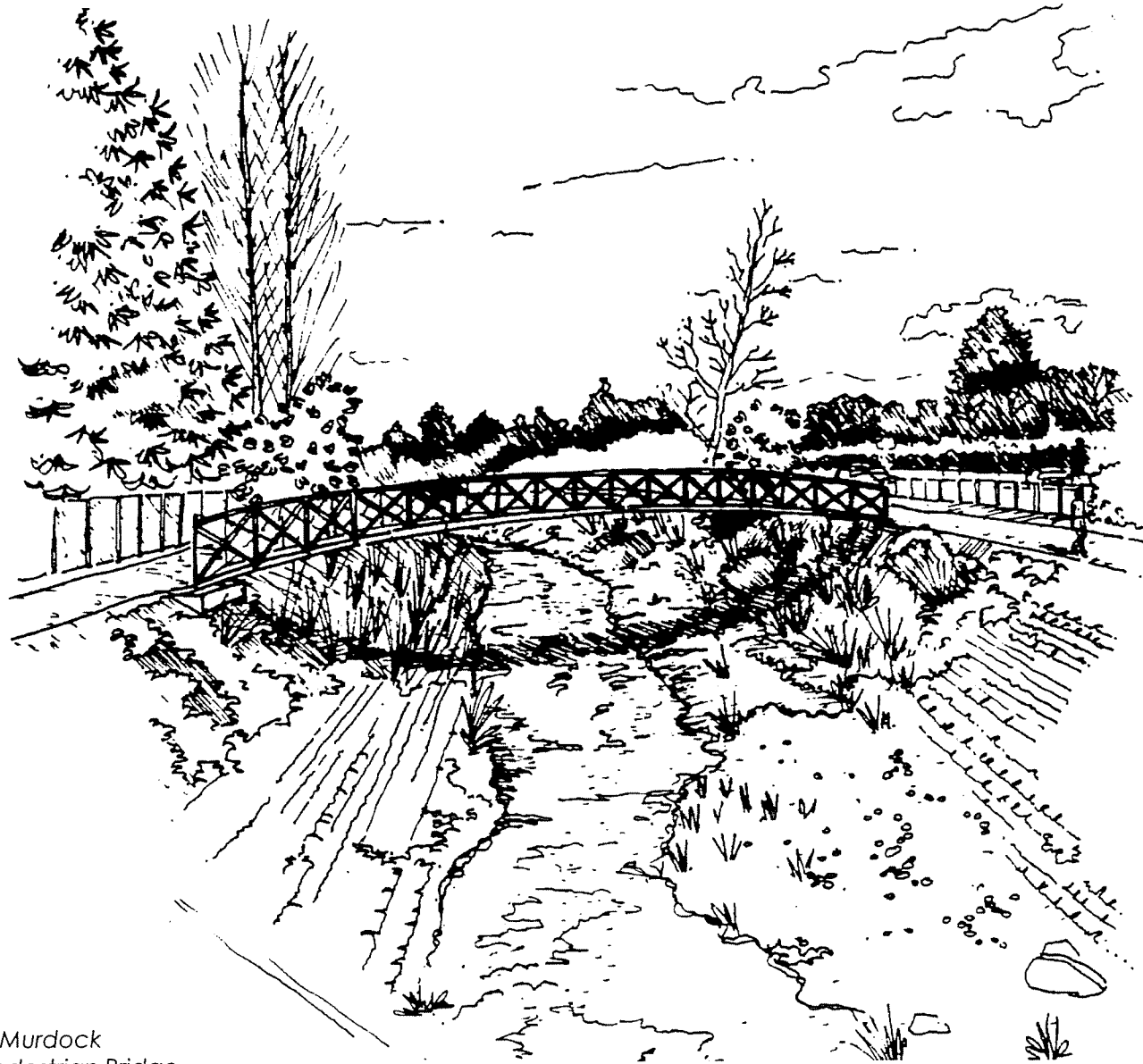


Illustration 2 - Creek
Environment north of Murdock
Park with proposed Pedestrian Bridge



ACCESS POINTS

Recreational access is proposed at two parks located directly along Reach 6. Murdock Park and Rainbow Park provide access to the trail. Neighborhood access is proposed at Doyle Drive and English Drive. The intersection of the Johnson Avenue with Prospect Road provides roadway access to sidewalks and bicycle lanes. This connection facilitates pedestrian and bicycle travel in the east-west direction.

STAGING AREAS

Two staging areas are proposed in Reach 6. Murdock Park and its surrounding educational campuses would provide staging area amenities nearby the trail. The City of San Jose has proposed expanding the parking facilities in this park area.

The second staging area is located at Prospect High School. This staging area would serve the needs of residents wishing to drive to the trail. A Class I trail extends along Saratoga Creek for only a short distance in Reaches 5 and 6. As a result of these limited creekside trail facilities, it is unlikely that the Prospect High School staging area would receive much use. However, the school site could meet the needs of those wishing to drive to the trail on the weekends. The Prospect High School staging area would have limited hours and parking restrictions developed in coordination with the school district.

SPUR TRAILS

Two spur trails are proposed in Reach 6. An access point at Doyle Drive will afford trail users the opportunity to cross Lawrence Expressway. Once across this roadway, trail users can join an existing spur trail that runs through Saratoga Creek Park. The Doyle Drive spur trail will also provide access to the Westgate West Shopping Center and the neighborhoods located east of Lawrence Expressway.

A soft surface pedestrian only trail from Murdock Park to English Drive is proposed through the open space located on the east bank of the creek. This connection would provide residents of the English Drive and Lyle Avenue neighborhoods with direct pedestrian access to the creek corridor and trail. This area is currently used by local residents for walking and nature observation. The site is extensively vegetated with a remnant oak woodland. This quality habitat is best preserved for wildlife and nature interpretation. Thus, the main trail alignment, designed to accommodate multiple uses, is routed through the Murdock Park and along city streets to Prospect Road.

CHAPTER 4

DESIGN GUIDELINES

San Tomas Aquino / Saratoga Creek Trail Master Plan 1999





These design guidelines are intended to establish minimum trail development requirements and offer design recommendations that will establish a consistent character of the trail as it is constructed over time by multiple agencies. The design guidelines also offer recommendations for private and public development projects that are located directly adjacent to the creeks. This section of the design guidelines is intended to strengthen the integrity of the riparian corridor and improve the aesthetic quality of the trail. The private and public development recommendations define appropriate land uses, adequate setbacks and type of landscaping to be established along the two creeks.

These design guidelines are intended for use by consultants including planners, landscape architects, hydrologists, civil engineers, architects and geotechnical engineers. These guidelines will assist city planners, engineers, planning and parks and recreation commissions and city councils in their review and approval of all development projects located along the two creeks. They will also assist those who ultimately care for the trail and creek including park staff, rangers, police and fire personnel, neighborhoods and nearby corporations. There are many examples of other trail corridors within Santa Clara County that are supported by nonprofit organizations or are adopted by local neighborhoods and nearby corporations. This type of stewardship is a likely outcome of the San Tomas Aquino/ Saratoga Creek Trail planning and development process.

The guidelines detail the features of the trail including trail types, trail intersections, staging areas, access points and habitat enhancements. Recommendations for private and public development projects located adjacent to the creek corridors are also provided. The guidelines recommend the exclusive use of native plant materials that can withstand the conditions resulting from engineered levees and irrigated landscape settings. A detailed plant palette is provided to ensure that these guidelines can be easily implemented along the trail and in all private and public projects that abut the creeks.



DESIGN GUIDELINES

PURPOSE OF THE GUIDELINES

These design guidelines have been prepared to ensure consistency along the creek corridors in both the trail design and habitat enhancement plantings. It is anticipated that the reaches of the trail will be developed over time, by different agencies and, possibly in conjunction, with other construction projects.

These design guidelines are intended to ensure that the trail identity is maintained throughout each individual construction project. The standard site features and elements of the trail will provide visitors with a sense of place and familiarity with the San Tomas Aquino/Saratoga Creek Trail. The features and elements of the trail are described and detailed through the use of cross-sections, concept plans and illustrations.

Private and public development projects have the potential to enhance the trail corridor or to impact the sensitive creek environment. It is the hope that these guidelines will ensure that all projects contribute toward the enhancement of the creek habitat and the construction of the trail. The cities of Santa Clara, Cupertino and San Jose should integrate these trail guidelines into the permitting process of all developments adjacent to the creek corridors as projects come forward for planning review.

Previously approved projects have impacted the creek corridor. The habitat along the creek corridor has often been compromised by small setbacks and inappropriate landscape plantings. The Santa Clara Valley Water District's ability to provide levee maintenance and construct new flood control improvements has been

diminished by creek setbacks that are too small to accommodate future flood control needs. The pedestrian and bicycle circulation system which includes the creek trail has received secondary consideration to the expansion of the roadway system. These guidelines are intended to prevent this from continuing to occur. These guidelines will allow the cities to respond more effectively to development ensuring that habitat enhancement and bicycle and pedestrian access along the creek corridors is addressed with each project. The identification of the trail alignment and development of these guidelines provides the implementing agencies with the long term planning tools needed to ensure the eventual construction installation of the San Tomas Aquino/Saratoga Creek Trail and associated enhance-ment plantings.

DESIGN CONCEPTS

This section introduces specific design concepts for the San Tomas Aquino/Saratoga Creek Trail. The design concepts address trail development, access points, staging areas, site amenities and habitat enhancements. The habitat enhancements include detailed plant species lists. The major design concepts include:

TRAIL DEVELOPMENT

- Develop a Class I trail along the creek that follows the trail alignment identified in the Master Plan Map.
- Develop the secondary system of spur trails that follows the alignments identified in the Master Plan Map.
- Emphasize staging areas and access points with site amenities.



ACCESS POINTS

- Develop access points at locations identified on the Master Plan Map that provide direct, convenient and safe ingress/egress to the trail.
- Locate access points throughout the length of each reach of the trail.
- Provide site amenities, such as bollards, signage and habitat enhancements at each access point to assist the users in identifying the trail.

STAGING AREAS

- Provide staging areas at locations identified on the Master Plan Map.
- Provide site amenities, such as parking, restrooms, drinking fountains, benches, bollards, trail maps, signage, habitat enhancements and security lighting as appropriate.

SITE AMENITIES

- Site amenities are used to establish a character for the trail, create a sense of place and provide trail users with needed comforts.
- Site amenities include: restrooms, drinking fountains, benches, bollards, gates, trail maps, signage and habitat enhancements. Security lighting may be installed at staging areas.

HABITAT ENHANCEMENTS

- Enhance the riparian habitat throughout the length of the creek corridors.
- Install native plant material as identified in the three plant palettes throughout the length of the trail.
- Integrate the native plant material into the landscape setbacks of adjacent developments.

TRAIL DEVELOPMENT

Four trail types are proposed throughout the length of the trail corridor. The trail corridor, paving type and design, engineered structures, habitat enhancements, site amenities, security and maintenance are detailed for each of the four trail types. These include:

- Class I - Bicycle Pathways
- Class II - Bicycle Lanes
- Class III - Bicycle Routes
- Pedestrian Only Soft Surface Trails

TRAIL TYPES

- **Class I Pathways** are considered by the California Department of Transportation (Caltrans) to be a pathway that provides for bicycle travel on a right of way completely separated from any street or highway. Class I trails are proposed adjacent to the creeks (See Figures 26 - 35).
- **Class II - Bicycle Lanes** are considered by Caltrans to provide a striped lane for one-way bicycle travel on a street or highway (See Figures 36 and 38).
- **Class III - Bicycle Routes** are considered by Caltrans to provide for shared use with motor vehicle traffic on a street or highway (See Figures 37 and 38).
- **Pedestrian Only Soft Surface Trails** are defined in this Master Plan as a pathway that provides exclusive pedestrian use on a right of way completely separated from any street or highway. A Pedestrian Only Soft Surface Trail will be surfaced in a soft nonbinding material (See Figure 39).



DESIGN GUIDELINES

CLASS I – BICYCLE PATHWAYS

A Class I Pathway is considered by the California Department of Transportation (Caltrans) to be a pathway that provides for bicycle travel on a right of way completely separated from any street or highway. The main trail corridor located adjacent to the creeks falls into this classification. Due to the complexity of this trail project, the extent of adjacent development and the urban fabric through which these creeks flow many different Class I conditions exist and are detailed in Figures 26 - 35.

1.0 CLASS I – BICYCLE PATHWAYS

DESIGN RECOMMENDATIONS

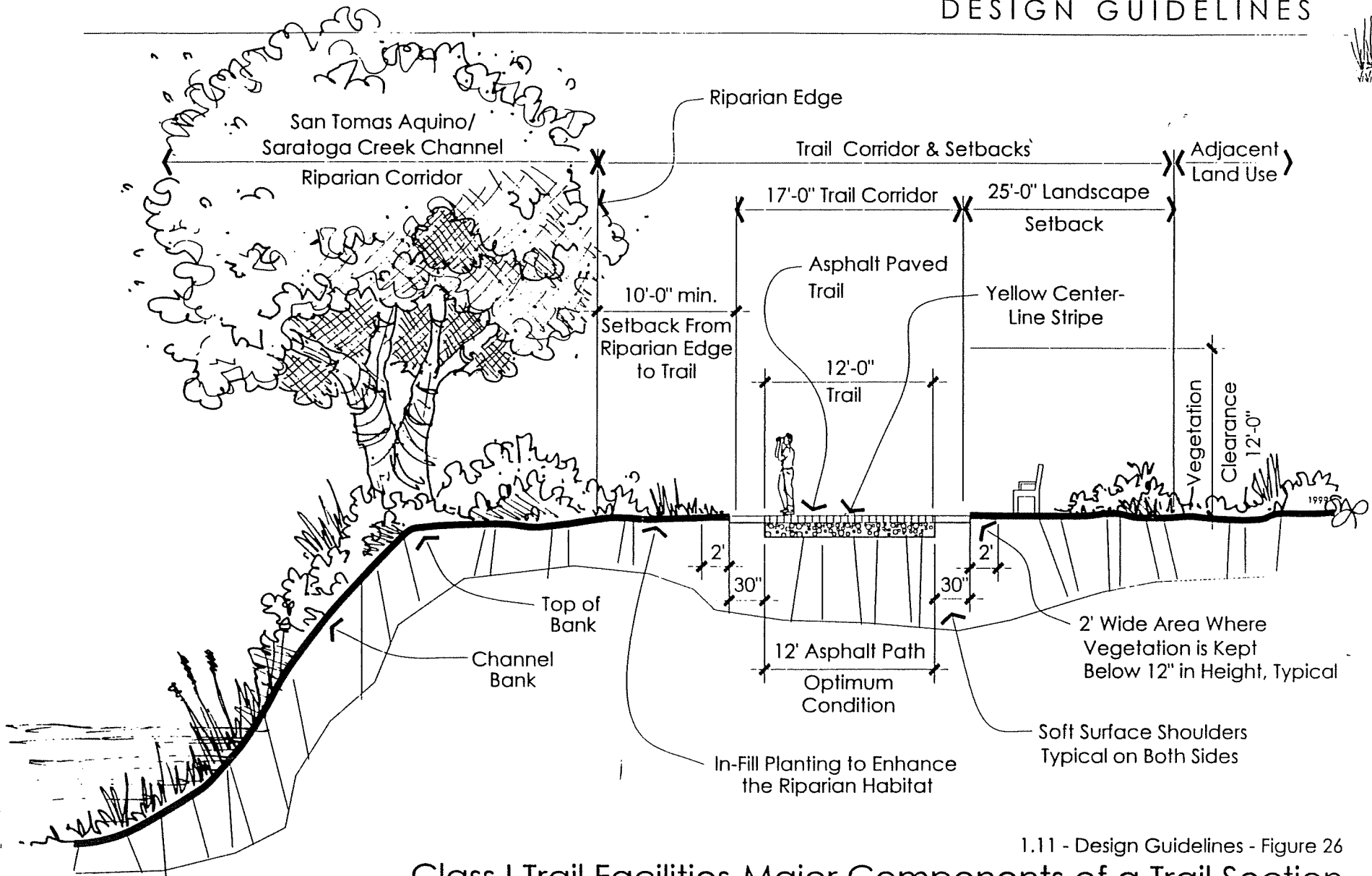
1.1 TRAIL CORRIDOR

The trail corridor consists of the trail and the shoulders and should comply with the provisions below.

- 1.11 Where space is available, provide a 17-foot wide trail corridor, a minimum 10 feet setback from the riparian edge and a 25 foot landscape setback from all adjacent property lines. When possible meander the trail to provide a more natural setting and create interest for the trail user (See Figure 26).
- 1.12 Much of the Class I section of the trail is planned to be constructed on the top of the SCVWD levees. The recommended trail width is a 12-foot wide asphalt paved surface with 2 1/2-foot soft surface shoulders

on either side (See Figure 27). Sections of the levees may not accommodate the recommended trail widths. If the top of the levee is less than 17 feet three options are available:

- A. In very constricted areas, the trail width is to be reduced to no less than 8 feet to accommodate the minimum shoulder width of 2-1/2 feet on either side for safety purposes (See Figure 28).
 - B. When possible and cost effective, the levee is to be widened on the outboard side of the creek channel to accommodate the 12-foot wide trail with 2 1/2 foot shoulders on either side (See Figure 29).
 - C. When adjacent development is planning to raise the building pad elevation above the 100-year flood, the zone between the building pad and the levee is to be filled to accommodate the 12-foot wide trail and to provide planting pockets for habitat enhancements (See Figure 30).
- 1.13 When the trail is located adjacent to Commercial/R&D Areas, a landscape setback should be provided to separate the creek habitat from the parking lot or building. Landscape Setbacks are to be a minimum of 5 feet, with the optimum distance of 25 feet (See Figure 31).
- A. The city, jurisdictional agencies, property owner or tenant should participate in determining if a fence is needed to secure the adjacent site. If security is not an issue, it is not recommended that fencing be installed.
 - B. Fence options include a good neighbor fence



1.11 - Design Guidelines - Figure 26

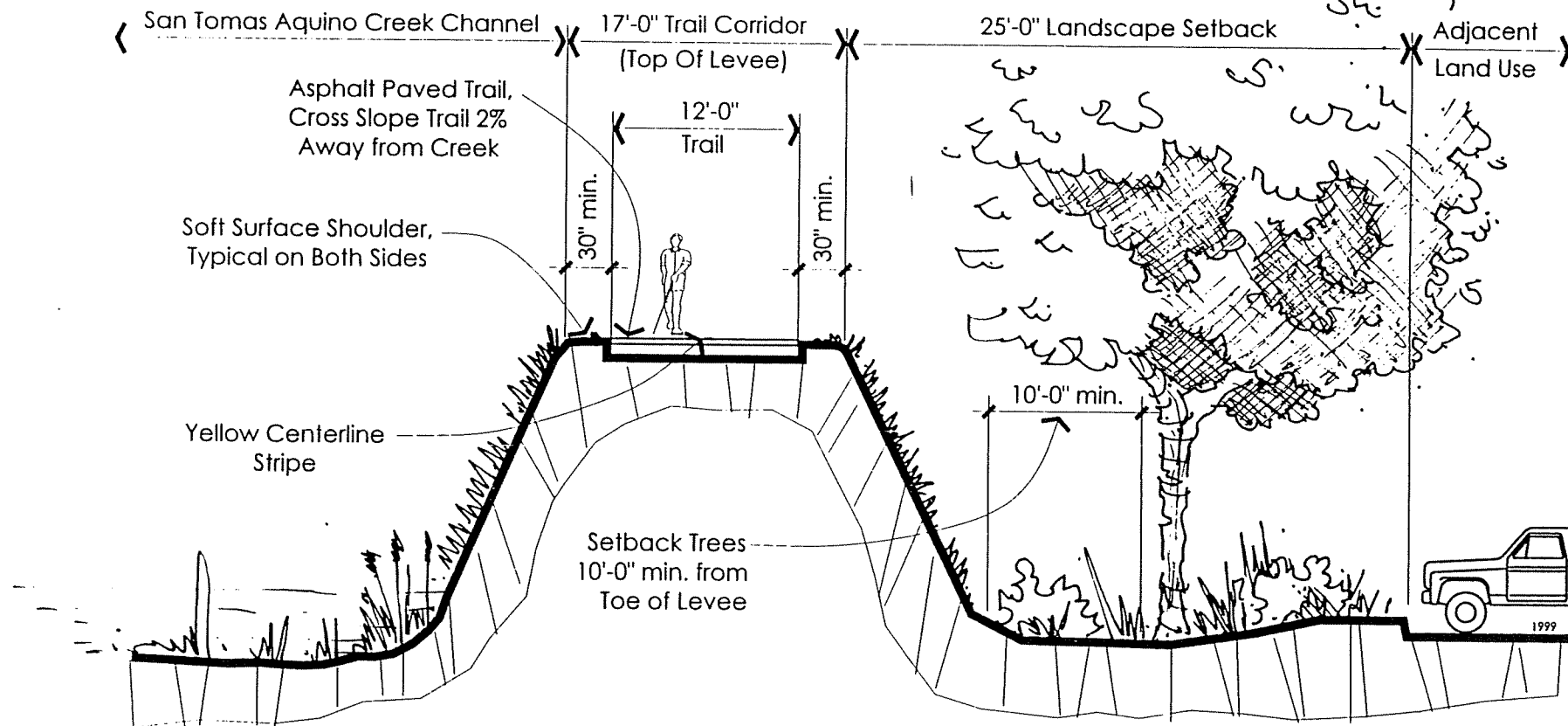
Class I Trail Facilities-Major Components of a Trail Section

Reach 1 & 2 - Raised Levee in Commercial/R&D Areas

Located Between Highway 237 to Scott Boulevard



DESIGN GUIDELINES

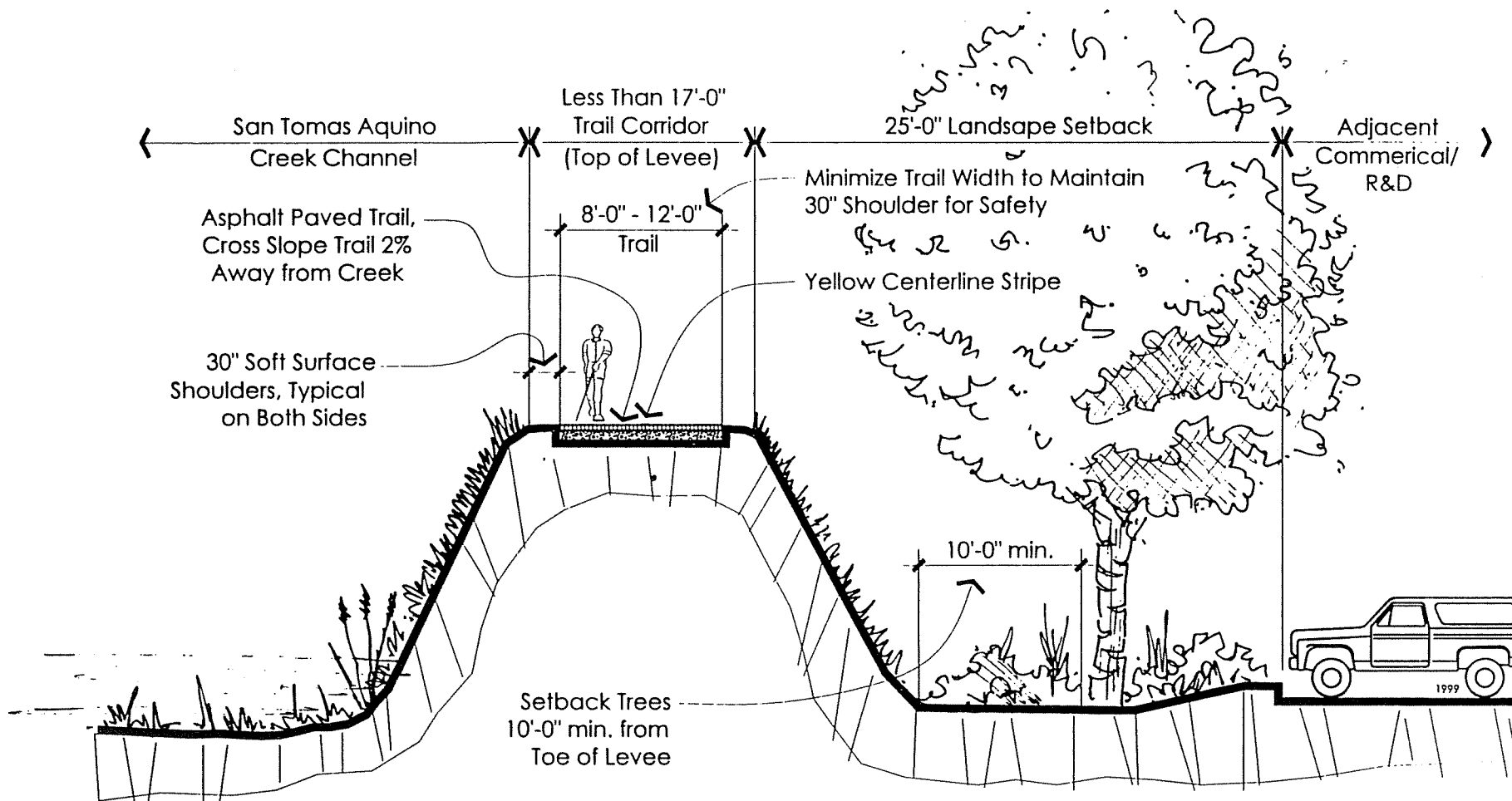


1.12 - Design Guidelines - Figure 27

Class I Trail Facilities-Raised Levee, Optimum Condition

Reach 1 & 2 - Raised Levee in Commercial/R&D Areas

Located Between Highway 237 to Scott Boulevard



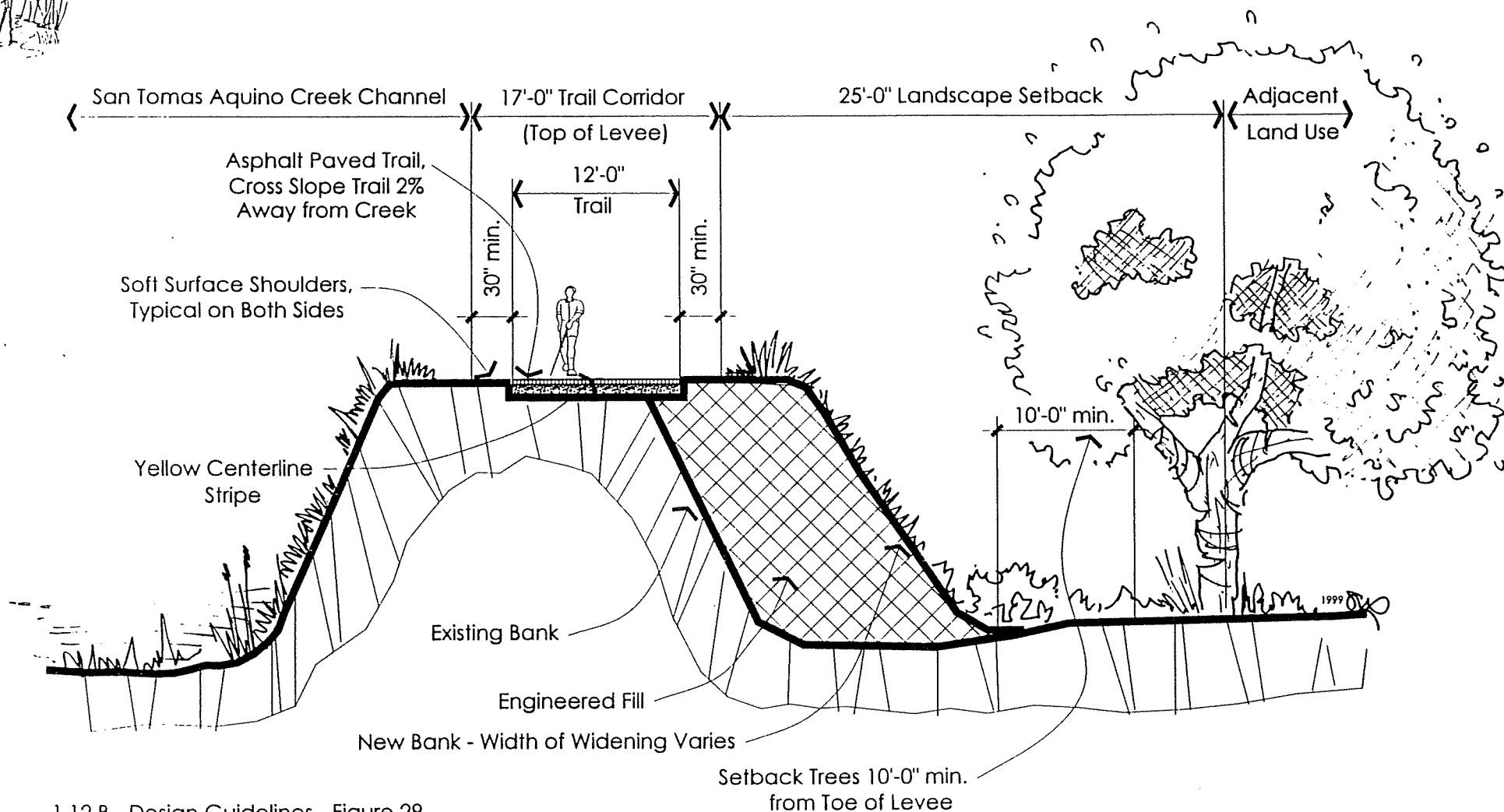
1.12.A - Design Guidelines - Figure 28

Class I Trail Facilities-Existing Constricted Levee-Option A: Reduce Trail Width

Reach 1 & 2-Raised Levee in Commercial/R&D Areas

Located Between Highway 237 to Scott Boulevard

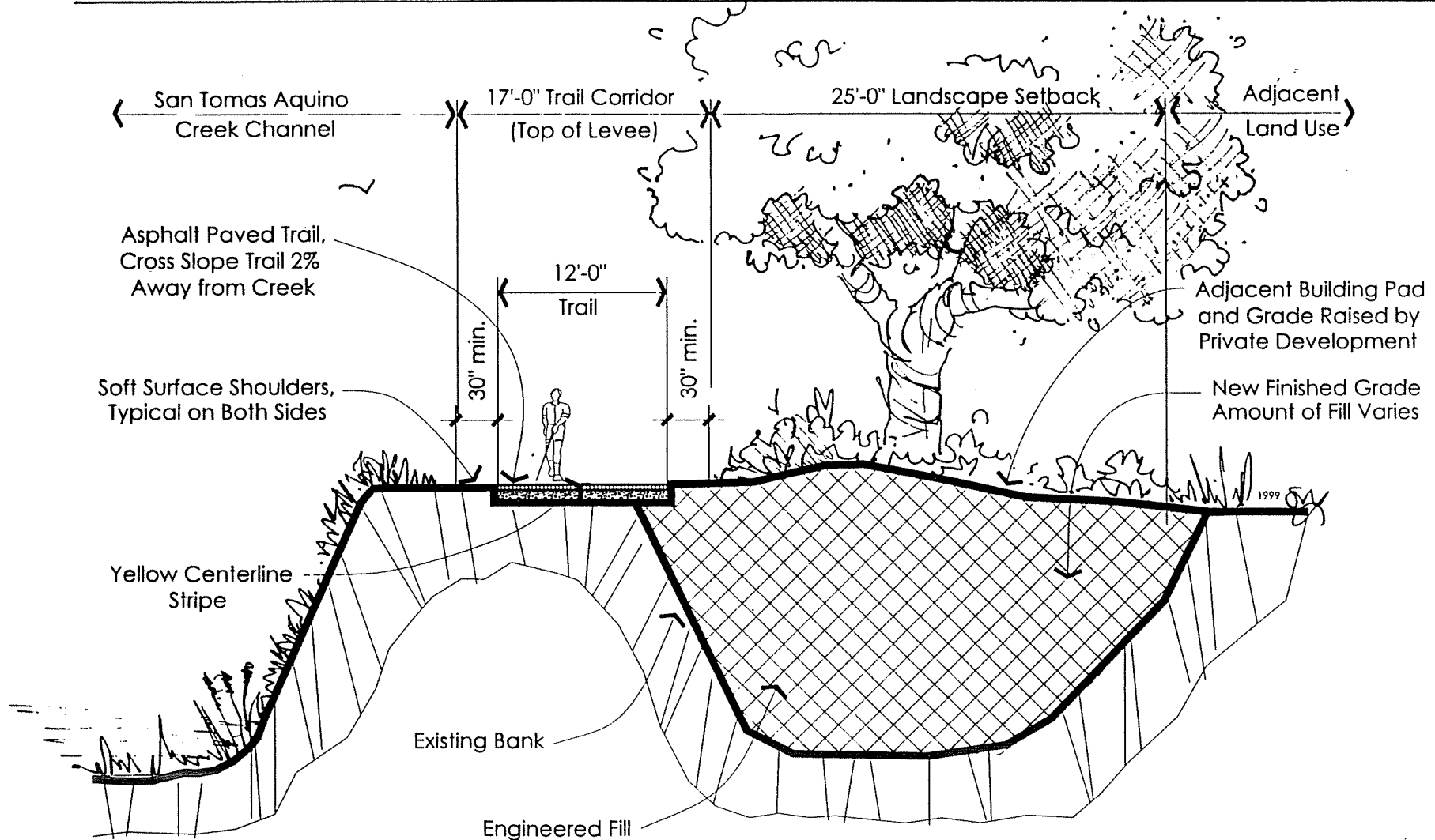
DESIGN GUIDELINES



1.12.B - Design Guidelines - Figure 29

Class I Trail Facilities-Existing Constricted Levee-Option B-Widen Levee to Increase Trail Width

Reach 1 & 2 - Raised Levee in Commercial/R&D Areas
Located Between Highway 237 to Scott Boulevard



1.12.C - Design Guidelines - Figure 30

Class I Trail Facilities-Existing Constricted Levee-Option C
Widen Levee to Meet Adjacent New Grades
 Reach 1 & 2 - Raised Levee in Commercial/R&D Areas
 Located Between Highway 237 to Scott Boulevard



DESIGN GUIDELINES

which will visually screen the buildings or an open fence which allows for views into the creek corridor. Refer to Site Amenities for additional information on fencing.

- 1.14 When the trail is located adjacent to private residences, a landscape setback should be provided to separate the trail corridor from the homes. Landscape Setbacks are to be a minimum of 5', with the optimum distance of 25-feet (See Figure 32).

- A. Homeowners should be contacted to determine if they desire a good neighbor fence to visually screen the trail or an open fence which allows for views into the creek.
- B. Fence options include a good neighbor fence which will visually screen the buildings or a open fence which allows for views into the creek. Refer to Site Amenities for additional information on fencing.

- 1.15 The area along Lawrence Expressway provides the greatest opportunity for habitat enhancement. There are three types of conditions that exist, each with different opportunities:

- A. In the area between Barnhart Avenue and Mitty Way the land is limited and a maintenance road exists. A new open fence should be installed between Lawrence Expressway and the trail to provide security viewing. Where the trail edge is less than 2 1/2 feet from the top of bank, a 54" high open fence should be provided (See Figure 33).
- B. In the area from Mitty Way to the Barrington

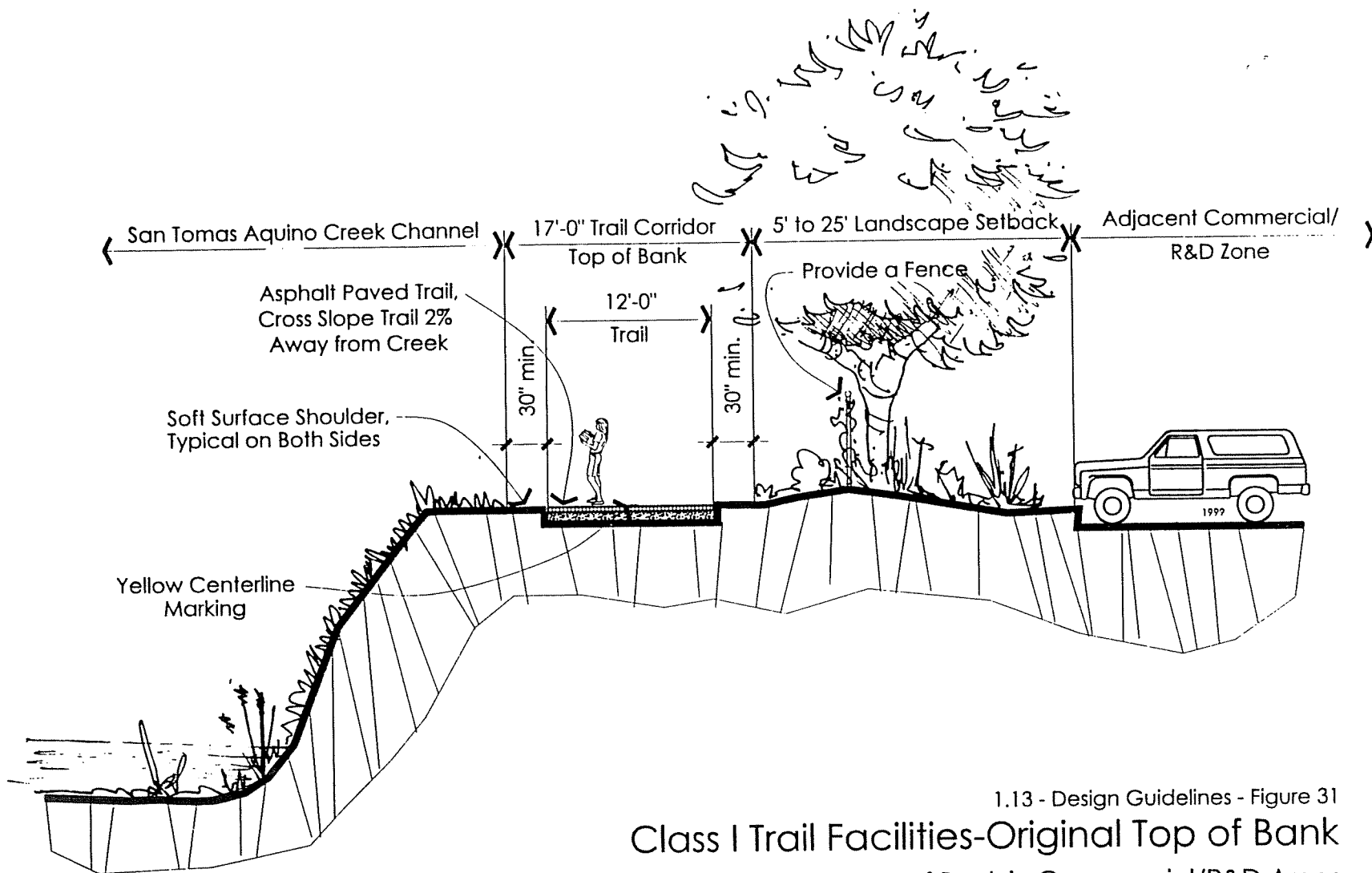
Bridge subdivision there are wide, opened areas of land. Meander the trail through this area to provide a more natural setting and create interest for the trail user (See Figure 34). Other elements include:

- 1. There has been a desire to develop a portion of this parcel for park use. Park activities should be limited to passive recreation which do not impact the natural habitat. Mowed grass is discourage, while meadows and oak grasslands consistent with the habitat enhancements are encouraged.
- 2. The mounds of debris and soil stored along the edge of the creek should be removed to open views into the creek from the trail.
- C. Habitat enhancements consistent with the plant palettes identified in this Master Plan are to be provided throughout the reaches.

- 1.16 The trail shall have a 2% cross slope that drains away from the creek. No over bank drainage from the improved areas of the trail will be allowed by SCVWD.

1.2 PAVING TYPE AND DESIGN

- 1.21 Trail designs are to comply with the most current version of the Caltrans Highway Design Manual - Chapter 1000 (Caltrans), the Americans with Disability Act Accessibility Guidelines (ADAAG), the Uniform Building Code (UBC), California's Title 24 (Title 24) and local and state codes governing outdoor paths of travel.

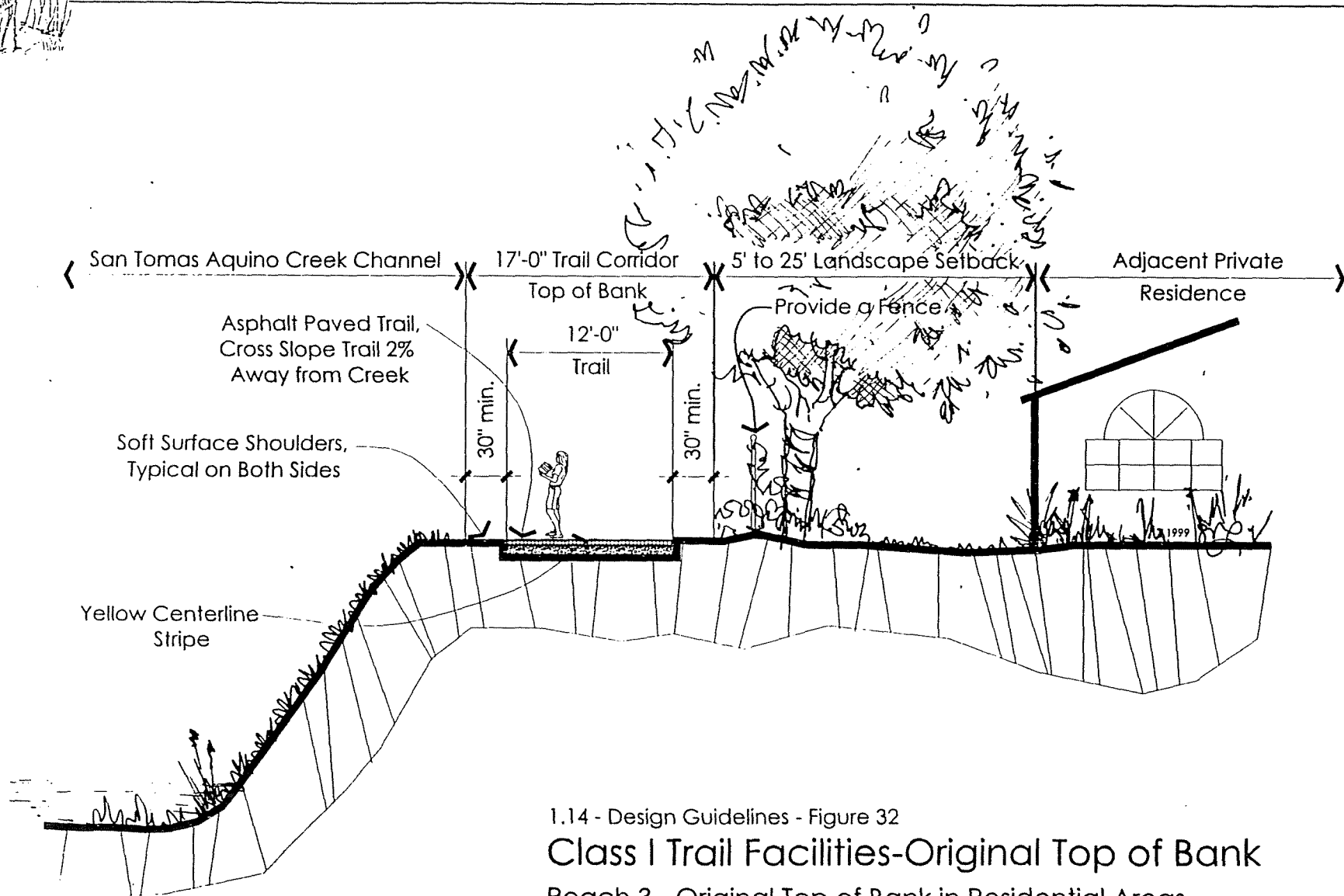


1.13 - Design Guidelines - Figure 31

Class I Trail Facilities-Original Top of Bank

Reach 3 - Original Top of Bank in Commercial/R&D Areas
Located Between Scott Boulevard and CalTrain

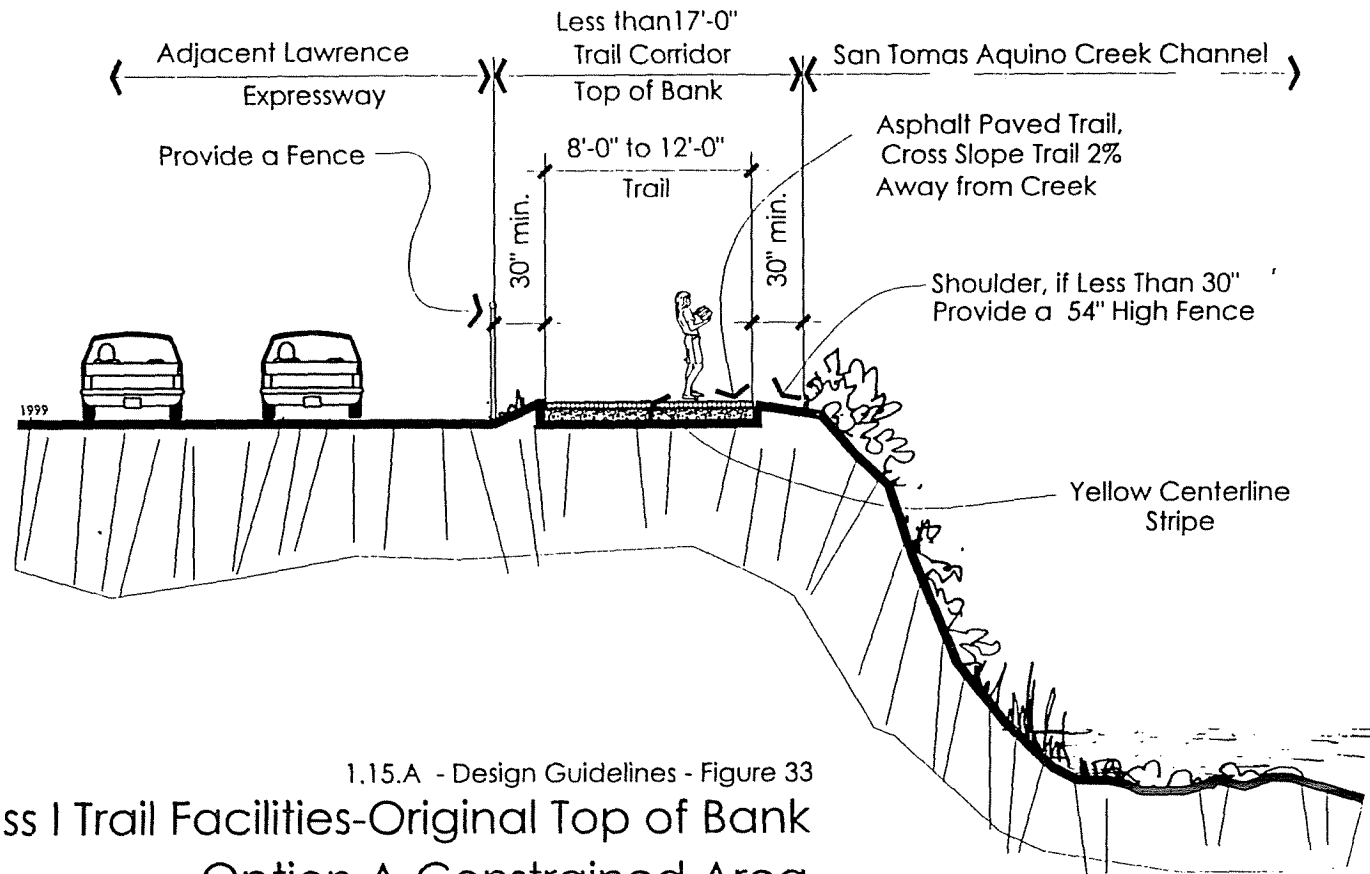
DESIGN GUIDELINES



1.14 - Design Guidelines - Figure 32

Class I Trail Facilities-Original Top of Bank

Reach 3 - Original Top of Bank in Residential Areas
Located between Scott Boulevard and CalTrain

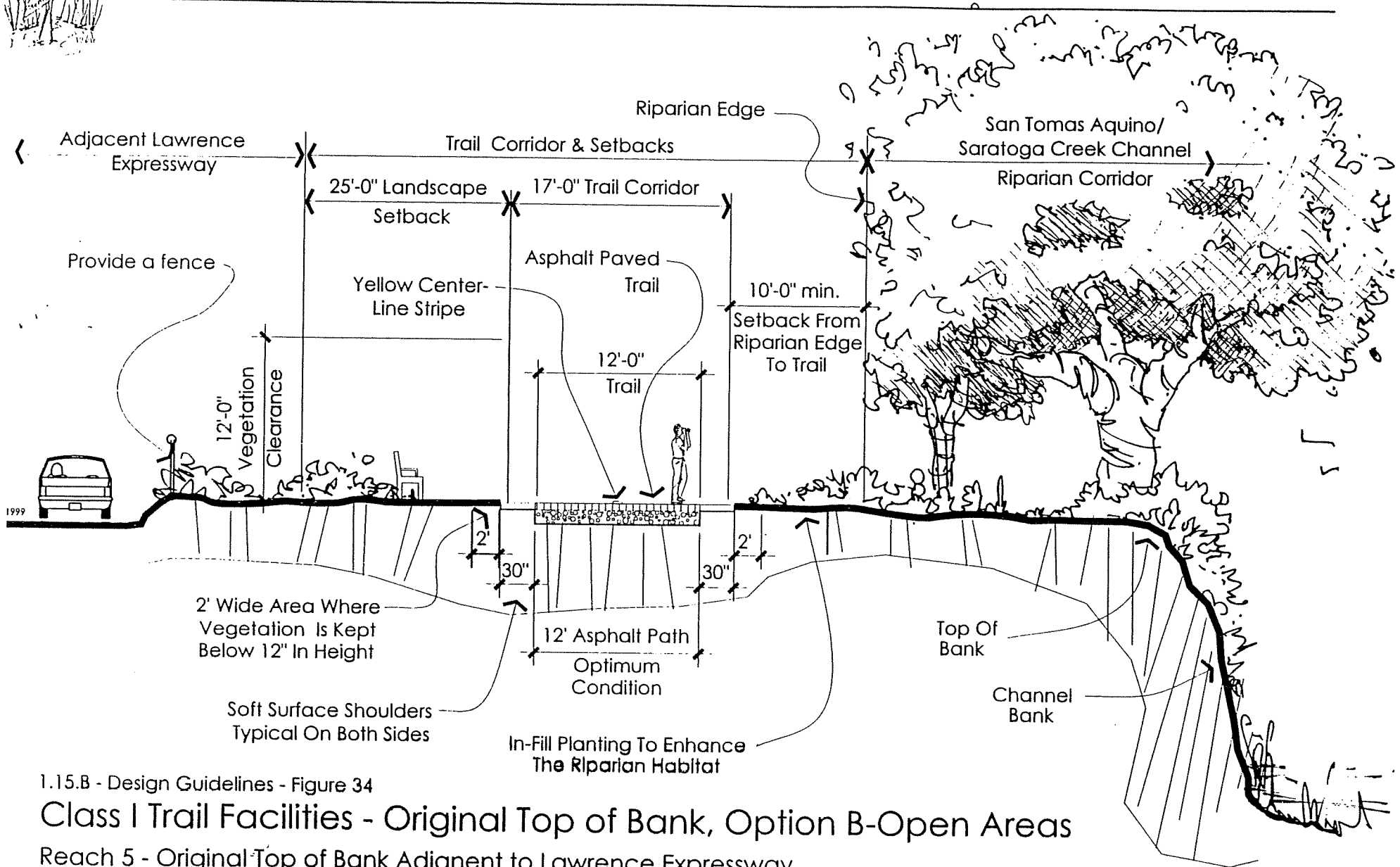


1.15.A - Design Guidelines - Figure 33

Class I Trail Facilities-Original Top of Bank Option A-Constrained Area

Reach 5 - Original Top of Bank Adjacent to Lawrence Expressway
Located Between Barnhart Avenue and Mitty Way

DESIGN GUIDELINES



1.15.B - Design Guidelines - Figure 34

Class I Trail Facilities - Original Top of Bank, Option B-Open Areas

Reach 5 - Original Top of Bank Adjacent to Lawrence Expressway
 Located Between Mitty Way and Barrington Bridge Development



1.22 The Class I trail is to be asphalt paved with an aggregate base and a compacted subgrade. The trail slope is to be a minimum of 2% and a maximum of 5% along the path of travel to comply with ADAAG and Caltrans. Slopes over 5% are more difficult to maneuver with bicycles and result in increased travel speeds. If conditions exist for short distances where the slope must exceed 5%, handrails and landings must be provided per ADAAG. At no time is the trail to exceed 8%, unless an alternative accessible path is provided.

1.23 SCVWD utilizes the majority of the paved trail for flood control and maintenance purposes. The District's heavy maintenance equipment will travel along the trail as it traverses the top of the levees and creek banks. The trail pavement section should be capable of handling H2O loading.

1.24 Provide a 4" wide yellow centerstripe on the path to separate opposing directions of travel.

1.25 Prepare a geotechnical report with recommended pavement design sections for each specific site under development to meet the criteria from SCVWD. There are many unique conditions each presenting different design challenges.

1.26 Horizontal alignment and superelevations for the path are to comply with Caltrans guidelines. The minimum design speed for this trail should be 20 mph. However, the actual posted speed limit should be 15 mph.

1.3 ENGINEERED STRUCTURES

1.31 Underpasses with Ramps and Tunnels with Ramps

- A. All underpass and ramp structures placed within the creek channel shall be constructed of concrete.
- B. The minimum vertical clearance for an underpass is 8 feet.
- C. The minimum trail underpass width is 8 feet to minimize hydrology impacts.
- D. The ramp slope is to be a minimum of 3% and a maximum of 5% along the path of travel to comply with ADAAG and Caltrans.
- E. Tunnel concrete shall include a water proof barrier to prevent seepage.
- F. Sight distance shall be sufficient that trail users have adequate time to respond to any blockages on the trail. On level sections with a travel speed of 20 mph, the required sight distance is 125 feet. This distance can be decreased on up grades and must be increased on down grades.
- G. Maximize the use of natural lighting in the design of tunnels and underpasses by providing skylights, view ports or other architectural features.
- H. Removable fold down railings will be incorporated



DESIGN GUIDELINES

in the design of each underpass. The railings are intended to provide year-round safety while allowing for high water flow during the winter months.

- I. Gates are to be located at the nearest access point to a underpass or tunnel. Gates are to be closed during storm events and high tides.

1.32 Pedestrian Bridges

Bridges will be clear span corten steel with wood decking and rub rails. Bridges are required to incorporate a 54" rail to comply with Caltrans guidelines. Steel cables shall be used to meet UBC guidelines for spherical opening. The use of steel cable will minimize the visual impact of the bridge.

1.33 At-Grade Street Crossings

Wilbur Smith Associates prepared these design guidelines in conjunction with their environmental review of the trail alignment. The environmental review under the guidelines of the California Environmental Quality Act (CEQA) was conducted by Thomas Reid Associates. The entire Wilbur Smith Associates' report can be found in Appendix C of the San Tomas Aquino/Saratoga Creek Trail Initial Study (See Figure 35).

A. At Signalized Intersections

1. Free right-turns that cross the legs with the trail should be brought under control
2. Left-turning vehicles that cross the trail should proceed during a separate signal phase from the trail users.

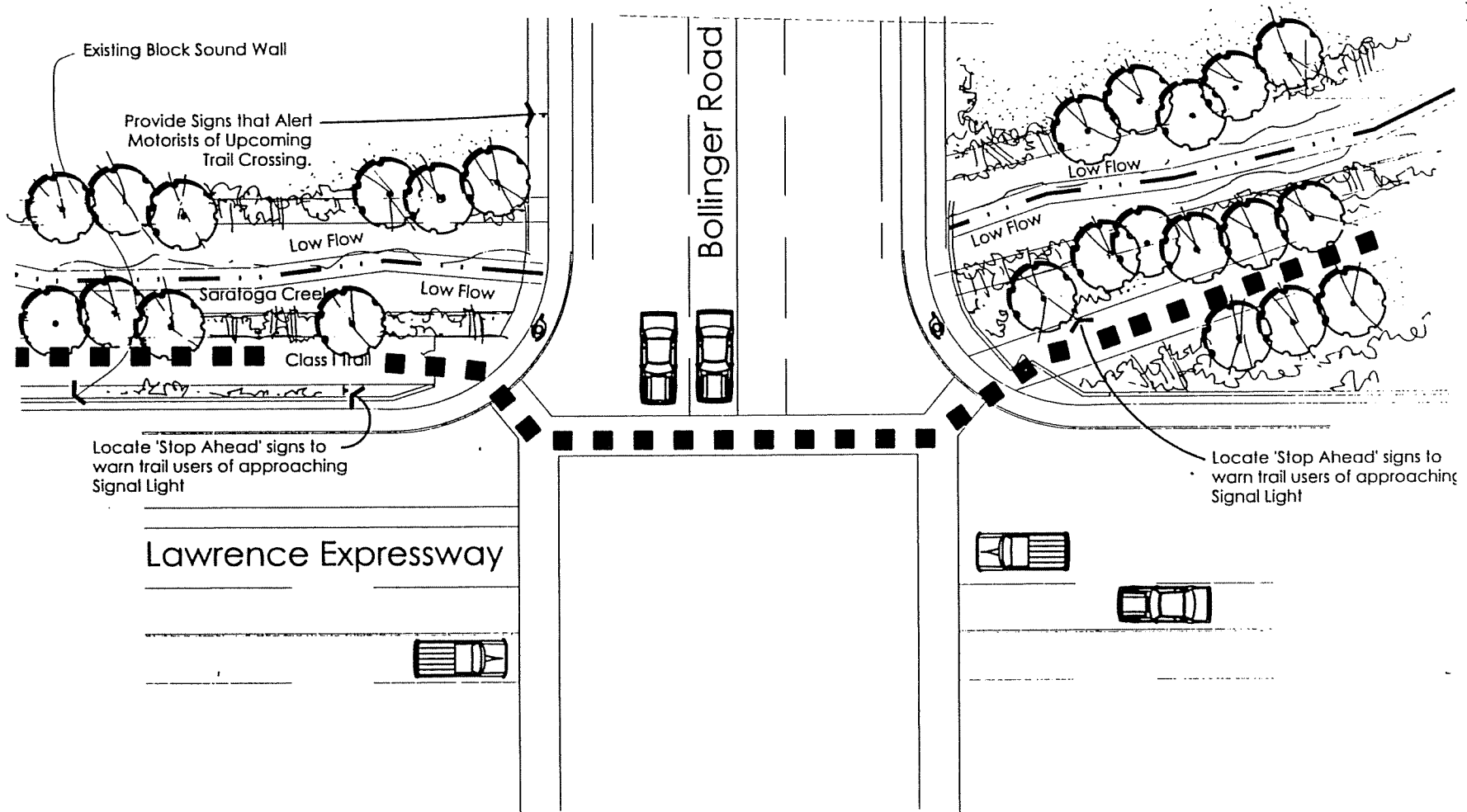
3. Make motorists aware of the presence of the trail crossing through:
 - a. Warning signing for all movements which conflict with the trail crossing; and
 - b. Trail surfacing through the intersection shall be a different color and /or texture.

B. At 3-Way Intersections where the trail becomes a Fourth Leg

1. Modify signals so that trail users on the new (fourth) leg of the intersection have their own signal heads. Consider providing bicycle-symbol heads if separate bicycle/pedestrian phase is provided as well as standard pedestrian signals.
2. Provide both pedestrian push-buttons and bicycle detectors.
3. Adjust signal timing so that the phase length is adequate for pedestrians and bicyclists to clear the intersection.
4. Review signal phasing so that left-turns do not conflict with trail users during their phase. This can be accomplished by providing a fourth phase during which only trail users have the green light.

C. At Mid-Block Crossings or through Unsignalized Intersections

1. Sight distance between trail users and drivers should remain clear for 200 feet, or more depending on the prevailing speed.
2. Warning signing for both trail users and motorists should be installed.



1.33 - Design Guidelines - Figure 35
 Class I Trail Facilities - At-Grade Street Crossings
 Reach 5 - Class I Street Crossing
 Located at Bollinger Avenue



DESIGN GUIDELINES

3. The trail should have a colored pavement surface across the roadway.
4. To encourage slower speeds, a speed table is recommended at the trail crossings.
5. Where the off-street portion of the trail passes through an unsignalized intersection, the curb radii should be designed such that the speed of turning motor vehicles is restricted to no more than 25 m.p.h..

1.4 HABITAT ENHANCEMENTS

- 1.41 A minimum 25-foot wide landscape setback shall be provided adjacent to the edge of the trail. This setback is measured for the outside edge of the trail corridor to the edge of the adjacent development. The landscape setback is described in detail under Habitat Enhancements.
- 1.42 Plant material within the landscape setback should consist of native vegetation and is to be of similar genus and species as local natives for this watershed and be of the plant palette identified for the specific reach.
- 1.43 Trees must be setback a minimum of 10 feet from the toe of the levee.
- 1.44 Meander native plantings along the creek alternating between loose and dense masses to reflect the patterns of natural stands of vegetation.
- 1.45 Provide breaks in the tree pattern for views into the creek and out of the trail corridor.

1.5 SITE AMENITIES

Since the majority of the trail is within the City of Santa Clara, they should take the lead in selecting the specific manufacturers and models for the items listed below.

- 1.51 Emphasize access points with pedestrian scale bollards, signage and other features.
- 1.52 Signage
 - A. The use of signage along the trail shall be limited to those which provide direction and alert the user of upcoming changes in direction.
 - B. Intersection signage shall alert the trail user and provide direction.
- 1.53 Benches and Resting Spots
 - A. Benches should integrate with the natural setting of the creek corridor.
 - B. Bench pockets should be spaced along the trail at intervals of 1/2 mile.
 - C. Benches should be set back 2 feet from the street to accommodate leg space and to prevent conflicts with passing sidewalk traffic.
- 1.54 Fencing & Walls
 - A. Fencing is to be used to control access to the trail and to assist in providing safety and security for the trail user. Fencing should be used only when necessary. Open fencing is to be a 54" black polyvinyl coated chain link fence with a top and bottom rail. Light, airy vines can be planted to grow in the fence, as long as views are not completely blocked.
 - B. Screen fencing is to be a maximum 8-foot high



wood with native vines planted to enhance the appearance.

1.55 Bollards

Removable or collapsible bollards should be placed at access points to deter unwanted vehicles, yet allow maintenance/security vehicles access to the trail.

1.6 SECURITY AND SAFETY

1.61 Each local city will institute a security patrol program for their section of the trail. The use of bicycle patrols is encouraged.

1.62 Emergency phones may be installed along the trail or at access points.

1.63 Security lighting of the trail is discouraged due to the environmental impact to wildlife. In some areas, such as staging areas and tunnels lighting may be necessary. The intent of any proposed security lighting program should be to only provide lighting for the period of time from dawn to 2 hours after sunset. This provides trail users already on the trail with the opportunity to reach their destination. Lighting of the trail is not desirable and is not proposed.

A. The local city may determine that lighting the staging areas may be necessary for security purposes. If proposed, the lighting program should be evaluated to determine if the lights could be turned off 2 hours after dusk.

B. Should security lighting be proposed, a detailed environmental analysis should be prepared addressing the impact to the wildlife.

C. Lighting should be located as far away from

habitat areas to minimize the impact on wildlife.

1.7 MAINTENANCE

1.71 Maintenance responsibilities for the trail, staging areas, access points and site amenities will be the responsibility of the local cities.

1.72 Each implementing city will need to consider maintenance operations and include funding in their annual operating budgets.

1.73 Maintenance operations should include weekly site inspections to determine the conditions of the trail surface. Sweeping of the trail should occur at least twice a month to keep the trail surface free of debris. In some areas, it may be necessary to sweep more frequently. This is to be determined by the implementing city.

CLASS II – BICYCLE LANE AND

CLASS III – BICYCLE ROUTE

A Class II - Bicycle Lane is considered by Caltrans to provide a striped lane for one-way bicycle travel on a street or highway (See Figure 36). The 6-foot wide striped lane is directly adjacent to motor vehicle traffic. The bicycle lane provides a restricted right-of-way designed for the exclusive flow of bicycles. Class III - Bicycle Route is considered by Caltrans to provide for shared use with motor vehicle traffic on a street or highway. Class III - Bicycle Routes offer a signed route for bicycle travel (See Figure 37).



DESIGN GUIDELINES

2.0 CLASS II – BICYCLE LANE AND CLASS III – BICYCLE ROUTE DESIGN RECOMMENDATIONS

2.1 TRAIL CORRIDOR

The trail corridor consists of on-street bicycle lanes and routes as described by Caltrans.

2.11 Trail designs are to comply with the most current version of the Caltrans Highway Design Manual - Chapter 1000 (Caltrans), the Americans with Disability Act Accessibility Guidelines (ADAAG), the Uniform Building Code (UBC), California Title 24 (Title 24) and local and state codes governing outdoor paths of travel.

2.12 A Class II - Bicycle Lane is considered by Caltrans to provide a striped lane for one-way bike travel on a street or highway (See Figure 36). The 6-foot wide striped lane is adjacent to motor vehicle traffic. The bicycle lane provides a restricted right-of-way designed for the exclusive flow of bicycles.

2.13 A Class III - Bicycle Route is considered by Caltrans to provide for shared use with motor vehicle traffic on a street or highway. Class III - Bicycle Routes offer a signed route for bicycle travel (See Figure 37).

2.2 PAVING TYPE AND DESIGN

2.21 Trail designs are to comply with the most current version of the Caltrans Highway Design Manual - Chapter 1000 (Caltrans), the Americans with Disability

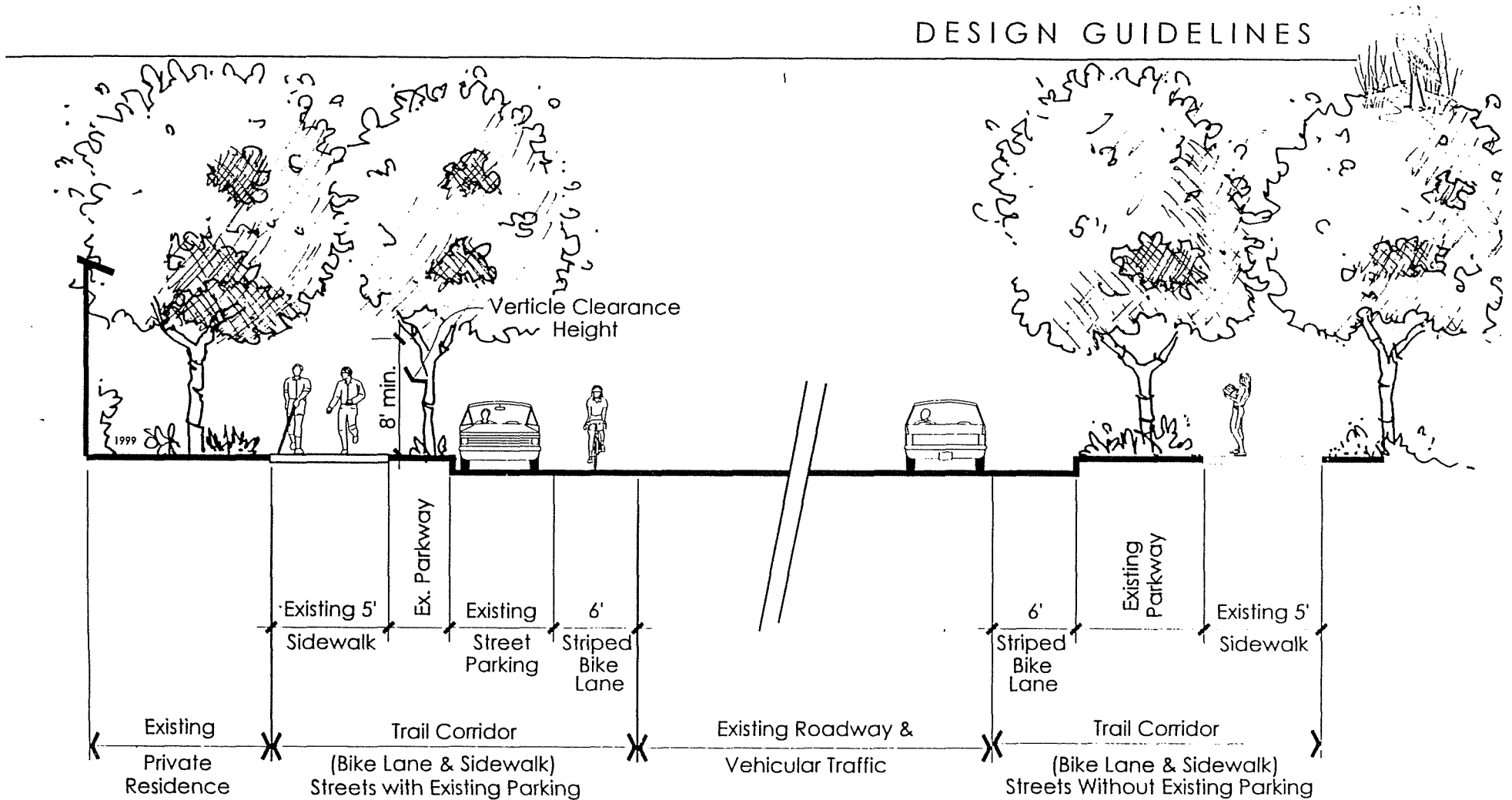
Act Accessibility Guidelines (ADAAG), the Uniform Building Code (UBC), California's Title 24 (Title 24) and local and state codes governing outdoor paths of travel.

2.22 Class II and Class III on-street facilities are to be asphalt paved with an aggregate base and a compacted subgrade. The trail slope is to be a minimum of 2% and a maximum of 5% along the path of travel to comply with ADAAG and Caltrans. Slopes over 5% are difficult to maneuver with bicycles and increase their speeds.

2.24 A civil engineer will need to prepare the construction plans for any work in the public right-of-way. Prepare a geotechnical report with recommended pavement design sections for each specific site under development to meet the criteria from Caltrans. There are many unique conditions each presenting different design challenges.

2.3 STREET CROSSINGS

Wilbur Smith Associates prepared these design guidelines in conjunction with their environmental review of the trail alignment. The environmental review under the guidelines of the California Environmental Quality Act (CEQA) was conducted by Thomas Reid Associates. The entire Wilbur Smith Associates' report can be found in Appendix C of the San Tomas Aquino/Saratoga Creek Trail Initial Study.

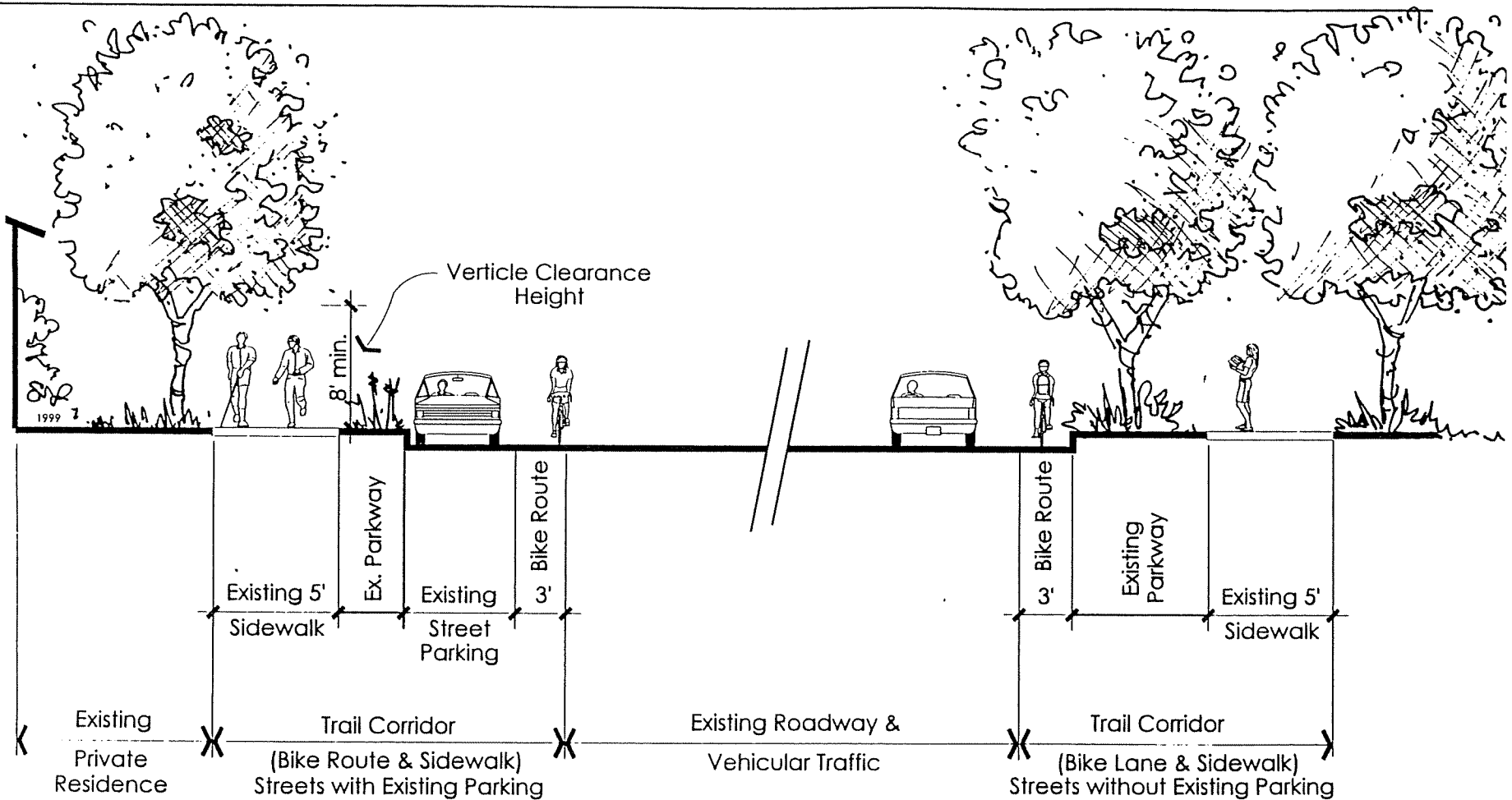


2.12 - Design Guidelines - Figure 36

Class II Facilities - Bike Lanes & Sidewalk

Reaches 4, 5, & 6 - Trail Alignment and Spurs on Roadways
Located in Areas between Cabrillo Avenue and Prospect Road

DESIGN GUIDELINES



2.13 - Design Guidelines - Figure 37

Class III Facilities-Bike Routes & Sidewalk

Reaches 4, 5, & 6 - Trail Alignment and Spurs on Roadways
Located in Areas between Cabrillo Avenue and Prospect Road



2.31 At Mid-Block Crossings

- A. Sidewalks on streets that constitute a part of the on-street alignment of the trail shall be continuous and at least four feet in width.
- B. Bicycle lanes shall be continuous and located on streets where average daily traffic volumes (ADT) > 4000 vehicles per day (vpd).

2.32 Through Signalized Intersections

- A. Curb return design such that right-turns are made at slower speeds.
- B. Free right-turns that cross the intersection approach with the trail should be brought under signal control or controlled with a STOP sign.
- C. Left-turning vehicles that cross the trail should proceed during a separate phase from trail users.
- D. Motorists should be made aware of the presence of the trail crossing by installing appropriate warning signing and trail markings through the intersection (See Figure 38).
- E. To improve the safety for pedestrians intersections shall provide crosswalks on all four legs, adequate signal timing for pedestrians and pedestrian push-buttons at all approaches.
- F. To improve the safety for bicyclists adequate signal timing at both fixed time and actuated signals will be provided. Actuated signals shall have bicycle sensitive detectors and pavement markings to indicate the location of the detectors.

2.33 At All-Way STOP Sign Controlled Intersections

- A. Crosswalks shall be provided on all legs of the intersection.

2.34 At Two-Way STOP where Trail Users have ROW

- A. Install signs informing/warning cross-street traffic.
- B. Crosswalks should be placed for trail users.

2.35 At 1-Way and 2-way STOP where Trail Users do not have ROW

- A. Crosswalks should be placed for trail users.
- B. Install signs informing/warning cross-street traffic.

2.4 SITE AMENITIES

2.41 Signage

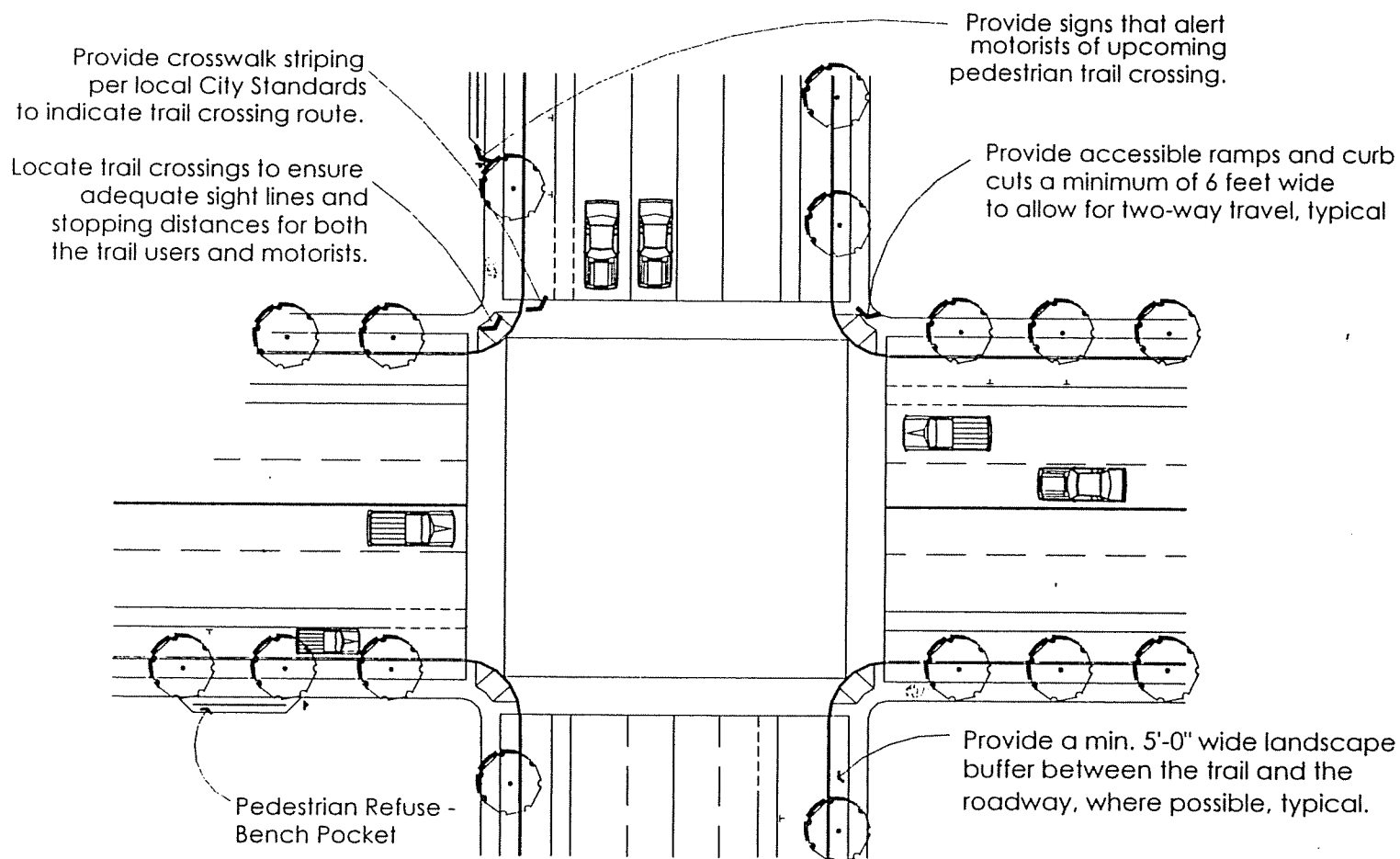
- A. The use of signage along the trail shall be limited to those which provide direction and alert the user of up coming changes in direction.
- B. Intersection signage shall alert the trail user and provide direction.

2.42 Benches and Resting Spots

- A. Benches should integrate with the natural setting of the creek corridor.
- B. Bench pockets should be spaced along the street at intervals of 1/2 mile.
- C. Benches should be set back 2 feet from the street to accommodate leg space and to prevent conflicts with passing sidewalk traffic.



DESIGN GUIDELINES



2.32 - Design Guidelines - Figure 38

Class II or III Facilities - At-Grade Street Crossings

Reaches 3, 4 & 5 - Class I Street Crossing

Located between Monroe Street and Bollinger



PEDESTRIAN ONLY SOFT SURFACE TRAIL

The Pedestrian Only Soft Surface Trail is defined in this Master Plan as a pathway that provides exclusive pedestrian use on a right of way completely separated from any street or highway. A Pedestrian Only Soft Surface Trail will be no greater than five feet wide and surfaced in a decomposed granite, bark chip, oyster shell or similar soft nonbinding material (See Figure 39).

3.0 PEDESTRIAN ONLY SOFT SURFACE TRAIL DESIGN RECOMMENDATIONS

3.1 TRAIL CORRIDOR

The trail corridor consists of the trail and should comply with the provisions below.

3.11 Where space is available, meander the trail to provide a more natural setting and create interest for the trail user.

3.12 The recommended trail width is 5-feet.

3.2 PAVING TYPE AND DESIGN

3.22 Soft surface trails shall be decomposed granite, bark chips, crushed stone, oyster shells, etc.

3.23 A header board is recommended if decomposed granite or crushed stone is selected.

3.24 The trail shall have a 2% cross slope that drains away from the creek. No over bank drainage into the creek will be allowed by SCVWD.

3.25 Trail designs are to comply with the most current version of the Americans with Disability Act Accessibility Guidelines (ADAAG), the Uniform Building Code (UBC) and local and state codes governing outdoor paths of travel.

STAGING AREAS

Six staging areas are planned along the trail. Staging areas are intended to accommodate trail users wishing to drive to a trailhead for either recreational or commute purposes. Five of the staging areas take advantage of existing sites and one is proposed for development (See Figure 40). The staging area locations include:

- Santa Clara Convention Center – Reach 1
- Monroe Street – Reach 3
- Santa Clara Youth Center – Reach 4
- Central Park – Reach 4
- Murdock Park – Reach 5/6
- Prospect High School – Reach 6

4.0 STAGING AREA

DESIGN RECOMMENDATIONS

Staging areas may include the following site features:

- A. Parking to accommodate automobiles and bicycles.
- B. Restrooms. All restrooms are to be locked at night.



DESIGN GUIDELINES

- C. Drinking fountains.
- D. Site furnishing such as benches and trash receptacles.
- E. Access to the trail.
- F. Signage indicating location and entrance.
- G. Kiosk to provide trail information and possibly trail maps.
- H. Decorative fencing and native plant landscaping to identify the trail and staging area.
- I. Operational hours should be from dawn to dusk.

ACCESS POINTS

Many access points are planned along the creek corridors. These points of ingress and egress are intended to accommodate trail users wishing to access the trail on foot and by bicycle. The access points are categorized into five groups. They include neighborhood access, business access, recreational access, educational access and roadway access. These terms are intended to describe the type of facility that connects to the trail at a particular access point. Access points may include:

5.0 ACCESS POINT

DESIGN RECOMMENDATIONS

Access Points are to be developed at locations identified on the Master Plan Map and are designed to provide direct, convenient and safe access to the trail (See Figure 40).

- 5.11 Locate access points at the beginning and end of each reach and at major destinations.

- 5.12 Provide site amenities, such as bollards, signage and habitat enhancements at each access point to assist the trail user in identifying the trail.

- 5.13 Pedestrian bridges or access ramps are to slope per ADAAG to meet the grade of the trail.

- 5.14 Use bollards to control vehicular access, while providing an accessible entry.

- 5.15 Provide trail signage to identify the trail and the specific location.

- 5.16 Provide an entry statement and native plant landscaping to identify the trail and access points.

- 5.17 Provide gates at each access point that can be locked during SCVWD maintenance operations and winter closures.

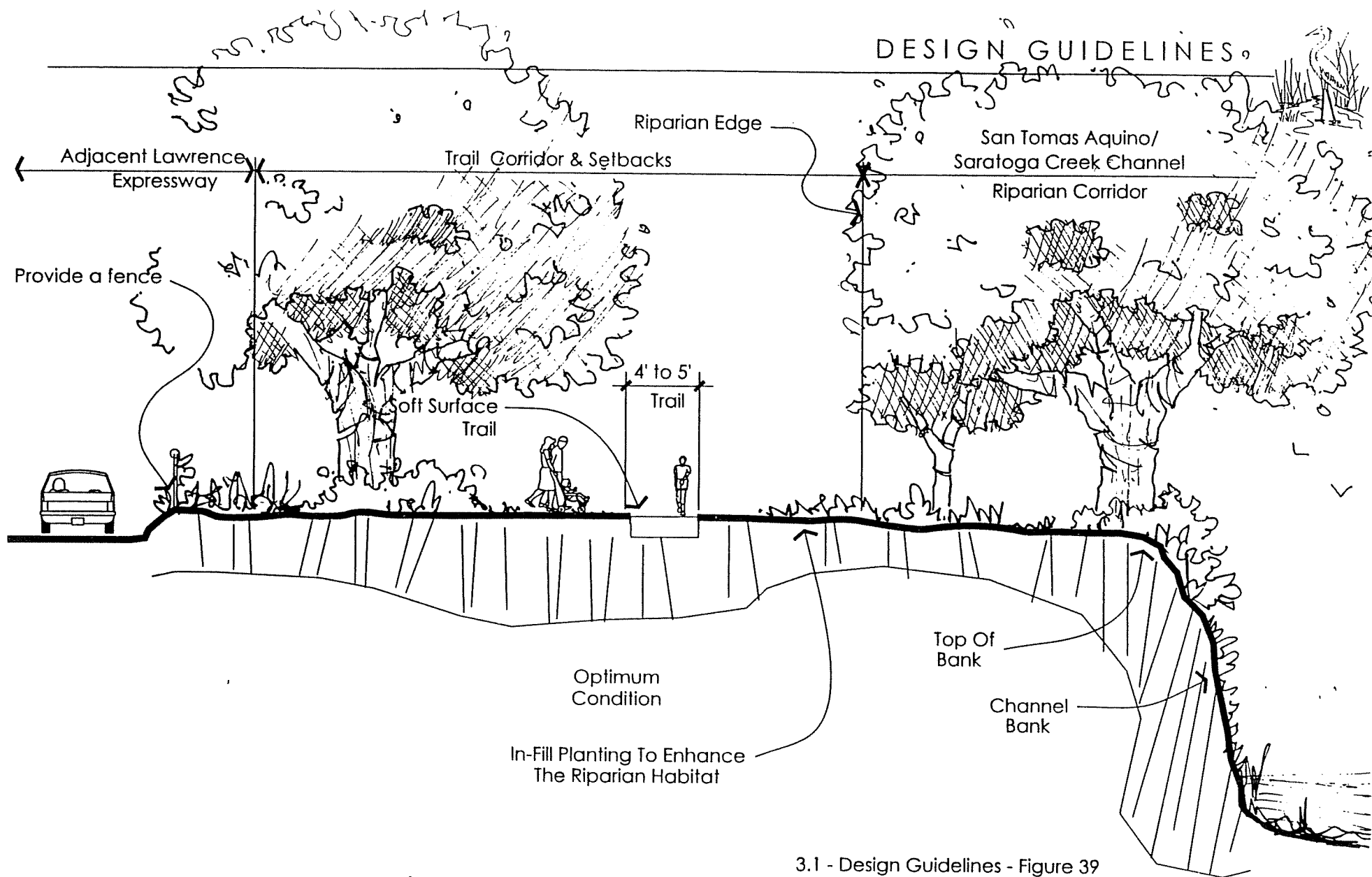
SITE AMENITIES

Since the majority of the trail is within the City of Santa Clara, they should take the lead in selecting the specific manufacturers and models for the items listed below.

6.0 SITE AMENITIES

DESIGN RECOMMENDATIONS

- 6.11 Emphasize access points with pedestrian scale bollards, signage and other features.



3.1 - Design Guidelines - Figure 39

Pedestrian Only Soft Surface Trail - Original TOB

Reach 6 - Original Top of Bank Adjacent to Lawrence Expressway
Located Between Murdock Park and English Avenue



DESIGN GUIDELINES

6.12 Signage

- A. The use of signage along the trail shall be limited to those which provide direction and alert the user of upcoming changes in direction.
- B. Intersection signage shall alert the trail user and provide direction.

6.13 Benches and Resting Spots

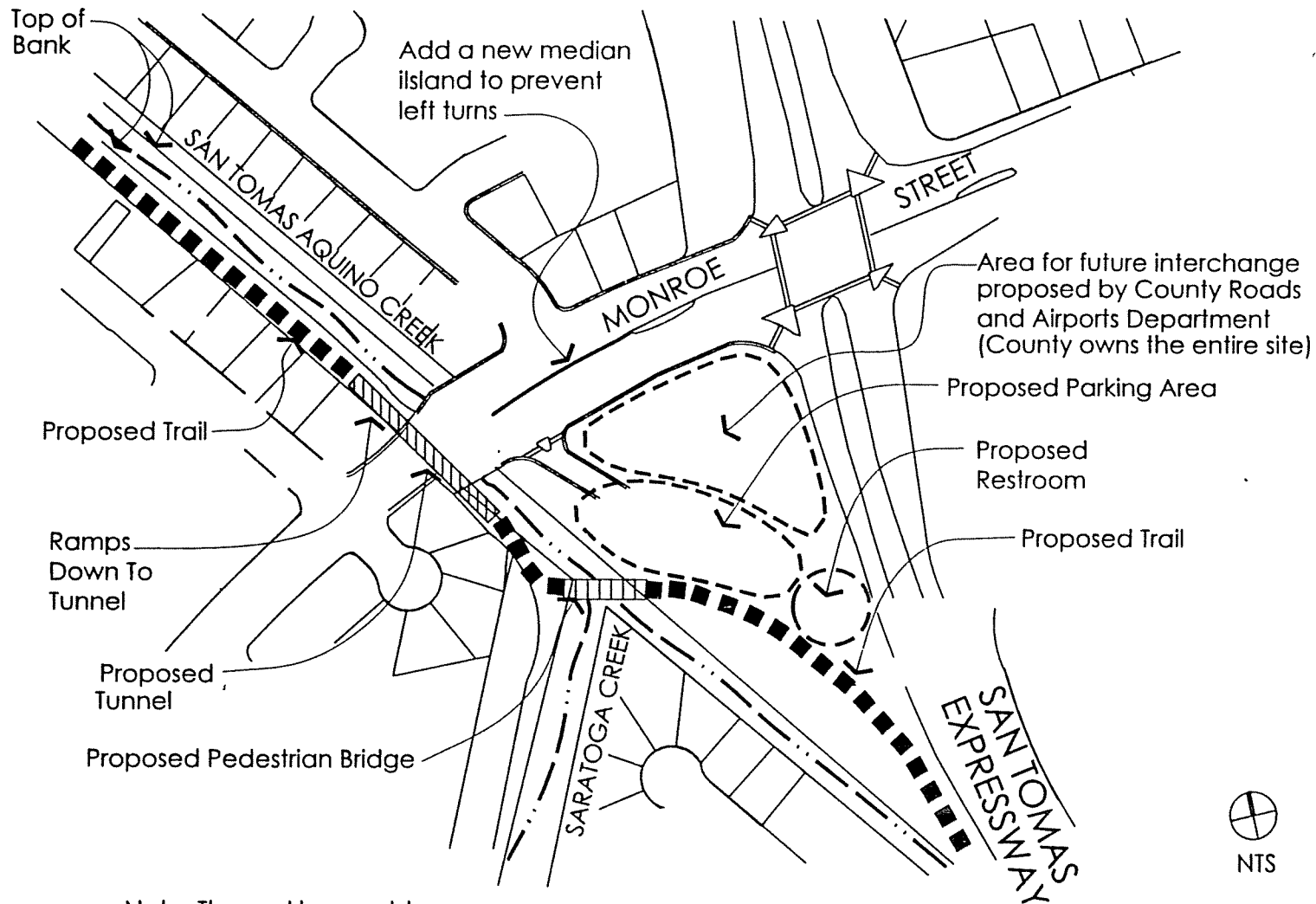
- A. Benches should integrate with the natural setting of the creek corridor.
- B. Bench pockets should be spaced along the trail at intervals of 1/2 mile.
- C. Benches should be set back 2 feet from the trail to accommodate leg space and to prevent conflicts with passing sidewalk traffic.

6.14 Fencing

- A. Open fencing is to be a 54" black polyvinyl coated chain link fence with a top and bottom rail. Light, airy vines can be planted to grow in the fence, as long as view are not completely blocked.
- B. Screen fencing is to be a maximum 8-foot high wood, good neighbor fence with ornamental vines planted to enhance the appearance.

6.15 Bollards

- A. Removable or collapsible bollards should be placed at access points to deter unwanted vehicles, yet allow maintenance/security vehicles access to the trail.



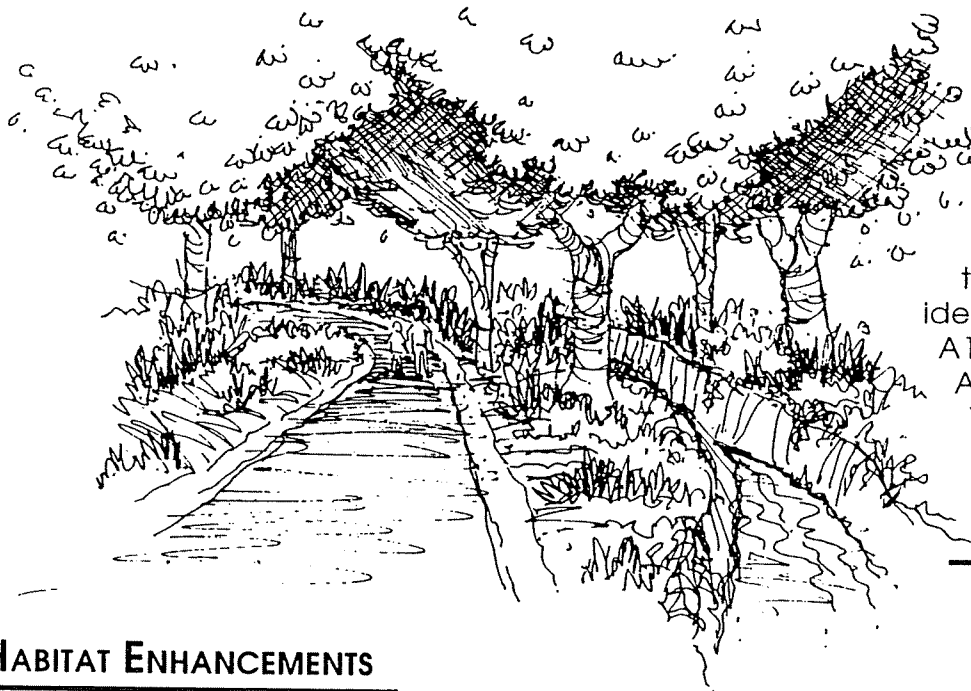
4.1 - Design Guidelines - Figure 40

Staging Area

Reach 3 - Monroe Street Staging Area Design Diagram
Located at Monroe Street and San Tomas Expressway



DESIGN GUIDELINES



HABITAT ENHANCEMENTS

Habitat enhancements are intended to integrate with the existing native plant species along the creek corridor and strengthen the integrity of the habitat. The species identified in the plant palettes will provide quality wildlife habitat by providing forage and cover. The plant palette is divided into the four different planting environments found along the trail from San Francisco Bay to Prospect Road. These habitat areas were identified during the biological assessment prepared for the 1996 San Thomas Aquino/Saratoga Creek Trail Feasibility Study.

A biological assessment was conducted in the spring of 1995 to evaluate the habitat sensitivity and the presence of species of concern throughout the length of the study area. The survey found four distinct habitat conditions from Highway 237 to Prospect Road. No federally or state listed, threatened or endangered species were observed during this survey. Several species of concern were identified. These findings are detailed in Appendix A1: Results of Biological Survey of San Tomas Aquino and Saratoga Creeks of the 1996 San Tomas Aquino/Saratoga Creek Trail Feasibility Study.

EXISTING HABITAT TYPES

The four habitat conditions found along San Tomas Aquino and Saratoga Creeks include:

- Brackish Marsh
- Concrete Channel
- Freshwater Riparian "Vegetation Preserve"
- Oak-Sycamore Riparian Forest

In general, habitat value improved at either end of the study area. The Brackish Marsh supported a host of wetland bird species and migratory waterfowl. The Oak-Sycamore Riparian Forest most closely resembled an intact plant community. The majority of the habitat is highly degraded by adjacent development and modifications to the stream channels.



BRACKISH MARSH

HIGHWAY 237 TO HIGHWAY 101

Downstream from Highway 101, the creek is channelized by earthen levees. Brackish Marsh is found in the bottom of this narrow creek channel from Highway 237 to Highway 101. Plants of the brackish marsh persist where freshwater mixes with saltwater. The fluctuations of saltwater and freshwater required to sustain the brackish marsh plant community makes it one of the most restrictive habitats of the South Bay. Pure stands of tule or bulrush (*Scirpus acutus*) grow in the deepest water while cattails (*Typha sp.*) appear slightly higher on the banks.

CONCRETE CHANNEL

HIGHWAY 101 TO THE CONFLUENCE

The confluence and the majority of the creek channel downstream to Highway 101 are characterized by earthen levees reinforced with concrete lining. This lining essentially excludes vegetation from rooting in the bottom of the channel or along the creek banks. Historically, a riparian scrub community comprised of various willow species (*Salix sp.*) likely persisted in this stretch of the creek corridor. Today, one finds only small pockets of cattails (*Typha sp.*) in areas where year-round, urban run-off filters into the unreinforced channel bottom. Various green algae species (*Chlorophyta*) grow along areas of the concrete lining when sufficient water is present.

VEGETATION PRESERVE

THE CONFLUENCE TO PRUNERIDGE AVENUE

The majority of the creek corridor has been engineered using gabions, to provide for flood control, with inset planters to support revegetation activities. The SCVWD designates much of this land as "vegetation preserves" and "vegetation enhancements." This portion of the corridor is characterized by a cottonwood-sycamore riparian forest. This plant community includes Fremont Cottonwood (*Populus fremonti*), Sycamore (*Plantanus racemosa*), Coast Live Oak (*Quercus agrifolia*), White Alder (*Alnus rhombifolia*) and Black Walnut (*Juglans hindsii*) (Holland, 1986).

OAK-SYCAMORE RIPARIAN FOREST

PRUNERIDGE AVENUE TO PROSPECT ROAD

The oak-sycamore riparian forest is the dominant plant community from Pruneridge Avenue to Prospect Road. Small open tracts of land bordered by Lawrence Expressway and Saratoga Creek support Coast Live Oaks (*Quercus agrifolia*) and Sycamores (*Platanus racemosa*). The more rapidly diminishing Valley Oak (*Quercus lobata*) is found along the upper banks. These oak trees represent a remnant oak-grassland, which once dominated the valley floor.



DESIGN GUIDELINES

7.0 HABITAT ENHANCEMENT

DESIGN RECOMMENDATIONS

Habitat enhancement recommendations and plant palettes have been developed for four distinct areas. These include two plant palettes for the Class I segments of the trail, landscaping recommendations for the Bicycle Lanes and Bicycle Routes and plant palette for private developments adjacent to the creek corridors. These recommendations are intended to assist trail developers and planning department staff and commissions in their approval of street and private development projects that are located along the creek corridor.

7.1 REACHES 1, 2, 3 AND MONROE STAGING AREA - CLASS I PATHWAYS

Very limited habitat exists outside the levees of the creek channel from Highway 237 to the Monroe Staging Area. The creek does support fresh and brackish marsh species where flood control improvements have not fully encased the channel in concrete. Habitat enhancement plantings along the trail would be installed outside of the levees in the landscape setback. The plants selected for this zone must be able to tolerate the adjacent engineered levee conditions. The plants will provide cover and forage for the creek corridor inhabitants and shade for trail users (See *Plant Palette 1*).

PLANT PALETTE LEGEND

The plant palettes are organized by Trees, Shrubs, Ground Covers/Vines and Grasses. The information provided for each species includes the following:

- Botanical Name
- Common Name
- E/D
 - E = Evergreen
 - D = Deciduous
- Height
- Spread
- Comments
- Adaptability
 - 1 = most adaptable
 - 2 = adaptable
 - 3 = least adaptable

- 7.11 The minimum recommended landscape setback is 25 feet. Whenever possible, provide setbacks greater than 25 feet.
- 7.12 Tree Setback along Raised Levees: Trees are NOT to be planted any closer than 10 feet from the toe of the slope of raised levees. This setback is required by SCVWD in order to maintain the integrity of the levees.
- 7.13 When possible, create drainage swales that direct rainwater towards the planting areas to provide additional water to the plants.



7.1 PLANT PALETTE 1 - REACHES 1, 2, 3 AND MONROE STAGING AREA - CLASS I PATHWAYS

Botanical Name	Common Name	E/D	Height	Spread	Comments	Adaptability
Trees						
Quercus lobata	Valley Oak	D	30' - 90'	40' - 60'	native oak	1
Quercus agrifolia	Coast Live Oak	E	25' - 70'	25' - 50'	Spreading tree of the grasslands	1
Umbellularia californica	California Bay Laurel	E	20' - 40'	30' - 40'	Plant close to water	2
Aesculus californica	California Buckeye	D	20'	25'	Pollen poisonous to honeybees; use in ravines	2
Garrya elliptica	Coast Silk Tassel	E	5' - 20'	20'	Drought tolerant, dioecious	1
Shrubs						
Achillea millefolium	White Yarrow	E	3'	18"	Fernlike leaves; green or gray green	2
Erigeron glaucus	Seaside Daisy	E	10" - 12"	10"	Lavender aster shaped flowers in summer	1
Salvia leucophylla	Purple Sage	E	2' - 6'	2' - 4'	Purple flowers, heat and drought tolerant	2
Ceanothus thyrsiflorus	Blue Blossom	E	15'	10'	Excellent forage for butterflies	2
Lupinus arboreus	Bush Lupine	D	4'	2'	Excellent forage for quail	3
Myrica californica	Pacific Wax Myrtle	E	20'	20'	Use as screen or tall hedge	2
Mimulus aurantiacus	Stickey Monkey Flower	E	3' - 5'	2' - 3'	Bright orange flowers for hummers	2



DESIGN GUIDELINES

7.1 PLANT PALETTE 1 - REACHES 1, 2, 3 AND MONROE STAGING AREA - CLASS 1 PATHWAYS (CONTINUED)

Botanical Name	Common Name	E/D	Height	Spread	Comments	Adaptability
Shrubs (Continued)						
<i>Baccharis pilularis</i>	Coyote Bush	E	3'	3'	Grow from male plant cuttings, good screen	2
<i>Rhamnus californica</i>	California Coffeeberry	E	3'-10'	3'-6'	Evergreen shrub, prefers slopes	2
<i>Fremontia californica</i>	Flannel Bush	E	3'-15'	3'-10'	Large yellow flowers in spring	2
<i>Ribes sanguineum</i>	Pink Flowering Currant	D	4'-10'	3'-6'	Pink flowers in early spring, prefers some shade	2
<i>Ribes speciosum</i>	Gooseberry	E	3'-6'	2'-3'	Has spines and is excellent as a barrier	2
Ground Covers/Vines						
<i>Bacc. p. consanguinea</i>	Dwarf Coyote Brush	E	2'	6'	Drought tolerant	1
<i>Zauschneria californica</i>	California Fuschia	E	18"	24"	Red trumpet shaped flowers in late summer	1
<i>Abronia latifolia</i>	Rose Sand Verbena	E	12"	3'	Plant in sandy areas	2
<i>Abronia umbellata</i>	Yellow Sand Verbena	E	12"	3'	Plant in sandy areas	2
<i>Clematis ligustifolia</i>	Virgin's Bower	D	15'	8'	White flowers with dies back each winter	2
<i>Aristolochia californica</i>	Dutchman's Pipe	D	15'	10'	Trumpet shaped flowers, forage for swallowtail butterfly	



7.1 PLANT PALETTE 1 - REACHES 1, 2, 3 AND MONROE STAGING AREA - CLASS I PATHWAYS (CONTINUED)

Botanical Name	Common Name	E/D	Height	Spread	Comments	Adaptability
Grasses						
<i>Bromus carinatus</i> var. <i>californicus</i>	California Brome	E	2'-4'	1'-2'	Good forage when young	2
<i>Elymus glaucus</i>	Rye Grass	E	2'-4'	1'-2'	Grows in association with oaks	1
<i>Stipa pulchra</i>	Purple Needle Grass	E	2'-4'	6"- 12"	Major component of grassland	1
<i>Festuca rubra</i>	Red Fescue	E	12"	6"- 12"	Hardy attractive for formal landscapes; can be mowed	1

7.14 Provide an automatic bubbler irrigation system during the 5-year plant establishment period. Due to the long term maintenance costs, Drip Irrigation systems are not desirable in areas maintained by public agencies. Spray heads are not desirable when planing California natives, especially if reclaimed (recycled) water will be used. Natives have not performed well with the high salt contents that can be found with reclaimed water. Additionally the use of spray heads can shorten the life of some native plants.

7.15 Planting stock should be locally collected from the San Tomas Aquino/Saratoga Creek watershed and grown under contract for this project. This will ensure that the integrity of the genetic pool found along Saratoga Creek is maintained. This is especially of concern with Coast Live Oak

(*Quercus agrifolia*), Valley Oak (*Quercus lobata*), Sycamore (*Platanus racemosa*), California Bay Laurel (*Umbellularia Californica*) and California Buckeye (*Aesculus Californica*) species.

7.2 REACHES 4, 5 AND 6

CLASS II - BICYCLE LANES AND

CLASS III - BICYCLE ROUTES

The enhancement plantings along the Class II - Bicycle Lane and Class III - Bicycle Route portions of the trail should take advantage of the existing street tree concepts in use along these roadways. This area includes city streets along the trail alignment from Monroe Street to Prospect Road. As the trail is developed and signed along these city streets, missing and /or diseased trees should be replaced as part of the trail project.



DESIGN GUIDELINES

7.3 REACHES 5 AND 6

CLASS I PATHWAYS

The habitats along the trail from Barnhart Avenue to English Drive are characterized by riparian species along the creek channel with oak-woodland species along the upper banks and remnant parcels of property adjacent to Lawrence Expressway. Several areas along Lawrence Expressway provide opportunities for habitat enhancement. The majority of this area has been used as a maintenance yard by the County Roads and Airports Department. Over time, this maintenance function should be relocated to a less sensitive habitat area and the site revegetated in conjunction with the trail. Habitat enhancement plantings would be installed along the trail and throughout the open space parcels adjacent to Lawrence Expressway. The plants selected for these reaches are intended to enhance the existing oak-sycamore riparian habitat found along Saratoga Creek (*See Plant Palette 2*).

- 7.31 The minimum recommended landscape setback is 25 feet. Additional setback is suggested whenever possible.
- 7.32 The 2% cross slope of the trail surface should be directed toward the plantings to provide rain water in addition to an irrigation system
- 7.33 The use of a bubbler irrigation system is recommended during a 5-year establishment period.

- 7.34 Planting stock should be locally collected from the San Tomas Aquino/Saratoga Creek watershed and grown under contract for this project. This will ensure that the integrity of the genetic pool found along Saratoga Creek is maintained. This is especially of concern with Coast Live Oak (*Quercus agrifolia*), Valley Oak (*Quercus lobata*), Sycamore (*Platanus racemosa*), California Bay Laurel (*Umbellularia Californica*) and California Buckeye (*Aesculus Californica*) species.

7.4 PRIVATE AND PUBLIC DEVELOPMENTS ADJACENT TO THE CREEK CORRIDORS

Areas directly adjacent to the creek corridor should be landscaped using native plant materials. These plant species will strengthen the integrity of the creek habitat and provide a buffer between the trail and nearby developments. As many native species as possible should be used in the landscape plans for adjacent developments. Many native plants can be used to create formal landscapes. Privately owned parcels adjacent to the creek which have existing landscapes planted with non-natives, should use native plants when replacement is required. This provides additional forage and cover to wildlife and shade for trail users. (*See Plant Palette 3*).



7.3 PLANT PALETTE 2 - REACHES 5 AND 6 - CLASS I PATHWAYS

Botanical Name	Common Name	E/D	Height	Spread	Comments	Adaptability
Trees						
<i>Quercus lobata</i>	Valley Oak	D	30' - 90'	40' - 60'	Native oak	1
<i>Quercus agrifolia</i>	Coast Live Oak	E	25' - 70'	25' - 50'	Spreading tree of the grasslands	1
<i>Acer macrophyllum</i>	Bib-leaved Maple	D	30'-60'	20'-40'	Requires shade	3
<i>Umbellularia californica</i>	California Bay Laurel	E	20' - 40'	30' - 40'	Plant close to water	2
<i>Aesculus californica</i>	California Buckeye	D	20'	25'	Seeds pods add interest	2
Shrubs						
<i>Ceanothus thyrsiflorus</i>	Blue Blossom	E	15'	10'	Excellent forage for butterflies	2
<i>Myrica californica</i>	Pacific Wax Myrtle	E	20'	20'	Use as screen or tall hedge	2
<i>Baccharis pilularis</i>	Coyote Bush	E	3'	3'	Grow from male plant cuttings, good screen	2
<i>Prunus ilicifolia</i>	Holly-leaved Cherry	E	10'-15'	8'-10'	Provides forage, excellent shrub	1
<i>Rhamnus californica</i>	California Coffeeberry	E	3'-10'	3'-6'	Evergreen shrub, prefers slopes	2
<i>Sambucus mexicana</i>	Blue Elderberry	D	10'-15'	10'-20'	Provides excellent cover	1
<i>Fremontia californica</i>	Flannel Bush	E	3' -15'	3'-10'	Large yellow flowers in spring	2
<i>Ribes sanguineum</i>	Pink Flowering Currant	D	4'-10'	3'-6'	Pink flowers in early spring, prefers some shade	2
<i>Artemesia californica</i>	California Sage	E	2'-5'	2'-5'	Provides excellent cover	2



DESIGN GUIDELINES

7.3 PLANT PALETTE 2 - REACHES 5 AND 6 - CLASS 1 PATHWAYS (CONTINUED)

Botanical Name	Common Name	E/D	Height	Spread	Comments	Adaptability
Ground Covers/Vines						
Baccharis p. consanguinea	Dwarf Coyote Brush	E	2'	6'	Drought tolerant	1
Zauschneria californica	California Fuschia	E	18"	24"	Red trumpet shaped flowers in late summer	1
Clematis ligustifolia	Virgin's Bower	D	15'	8'	White flowers with whorled seed pods dies back each winter	2
Aristolochia californica	Dutchman's Pipe	D	15'	10'	Forage for butterflies	2
Grasses						
Bromus c.var. californicus	California Brome	E	2'-4'	1'-2'	Good forage when young	2
Elymus glaucus	Rye Grass	E	2'-4'	1'-2'	Grows in association with oaks	1
Stipa pulchra	Purple Needle Grass	E	2'-4'	6"- 12"	Major component of grassland	1
Festuca rubra	Red Fescue	E	12"	6"- 12"	Hardy attractive for formal landscapes; can be mowed	1



7.4 PLANT PALETTE 3 - PRIVATE AND PUBLIC DEVELOPMENTS ADJACENT TO THE CREEK CORRIDORS

Botanical Name	Common Name	E/D	Height	Spread	Comments	Adaptability
Trees						
<i>Alnus rhombifolia</i>	White Alder	D	20'-40'	20'-30'	Fast grower, likes water	1
<i>Quercus lobata</i>	Valley Oak	D	30' - 90'	40' - 60'	Native oak	1
<i>Quercus agrifolia</i>	Coast Live Oak	E	25' - 70'	25' - 50'	Spreading tree of the grasslands	1
<i>Umbellularia californica</i>	California Bay Laurel	E	20' - 40'	30' - 40'	Plant close to water	2
<i>Aesculus californica</i>	California Buckeye	D	20'	25'	Large seed pods add interest	2
Shrubs						
<i>Ceanothus thyrsiflorus</i>	Blue Blossom	E	15'	10'	Excellent forage for butterflies	2
<i>Myrica californica</i>	Pacific Wax Myrtle	E	20'	20'	Use as screen or tall hedge	2
<i>Baccharis pilularis</i>	Coyote Bush	E	3'	3'	Grow from male plant cuttings, good screen	2
<i>Prunus ilicifolia</i>	Holly-leaved Cherry	E	10'-15'	8'-10'	Excellent screen	1
<i>Rhamnus californica</i>	California Coffeeberry	E	3'-10'	3'-6'	Evergreen shrub,	2
<i>Fremontia californica</i>	Flannel Bush	E	3' -15'	3'-10'	Large yellow flowers in spring	2
<i>Ribes sanguineum</i>	Pink Flowering Currant	D	4'-10'	3'-6'	Pink flowers in early spring, prefers some shade	2
<i>Ribes speciosum</i>	Gooseberry	E	3'-6'	2'-3'	Has spines and is excellent as a barrier	2



DESIGN GUIDELINES

7.4 PLANT PALETTE 3 - PRIVATE AND PUBLIC DEVELOPMENTS ADJACENT TO THE CREEK CORRIDORS (CONTINUED)

Botanical Name	Common Name	E/D	Height	Spread	Comments	Adaptability
Grasses						
Bromus c.var. californicus	California Brome	E	2'-4'	1'-2'	Good forage when young	2
Elymus glaucus	Rye Grass	E	2'-4'	1'-2'	Grows in association with oaks	1
Stipa pulchra	Purple Needle Grass	E	2'-4'	6" - 12"	Major component of grassland	1
Festuca rubra	Red Fescue	E	12"	6" - 12"	Hardy attractive for formal landscapes; can be mowed	1

CHAPTER 5

DEVELOPMENT CHALLENGE

San Tomas Aquino / Saratoga Creek Trail Master Plan 1999





The costs of developing the San Tomas Aquino/Saratoga Creek Trail are discussed and estimated in this chapter. Budget estimates are based on the conceptual engineering solutions and the 1995 *Santa Clara Countywide Trail Master Plan* design guidelines. Budget estimates were determined by calculating estimated quantities and then applying unit costs to these quantities. These budget estimates must be refined during the preparation of construction documents when more precise information regarding subsurface geotechnical investigations, hydrological analysis of proposed trail structures and bridge structure "as-builts" are evaluated. The construction subtotal is increased by 10% for mitigation and an additional 5% for trail amenities. All of these figures are rough calculations which will require review and refinement when the construction drawings and specifications are prepared. A 20% project contingency is reflected in the total estimate because of the uncertainty associated with rough calculations. The six reaches are presented individually.

Description	Budget Estimate
1 Highway 237 to Agnew Road	\$ 3,926,000
2 Agnew Road to Scott Boulevard	\$ 3,106,000
3 Scott Boulevard to Monroe Street	\$ 6,016,000
4 Monroe Street to Pruneridge Avenue	\$ 1,091,000
5 Pruneridge Avenue to Bollinger Road	\$ 1,908,000
6 Bollinger Road to Prospect Road	\$ 1,081,000
TOTAL PROJECT ESTIMATE (1999 dollars)	\$17,128,800

Figure 41 - Summary of Budget Estimates

DESIGN AND CONSTRUCTION COSTS

The design and construction cost for completing the San Tomas Aquino/Saratoga Creek Trail is estimated to be \$17,128,000. This budget estimate includes design fees, numerous engineered features, pedestrian/bicycle bridges, trail surfacing, staging areas, neighborhood access improvements, habitat mitigation and trail amenities including benches and signage. The budget estimate does not include land acquisition or easement costs. All estimates for the trail use the 1999 dollar. Annual cost escalations have not been included in the budget estimates. Cost escalations have typically averaged approximately 5% per year.

The total construction cost for the proposed alignment and spur trails are summarized below (See Figure 41). The trail design guidelines require a 12-foot wide asphalt paved trail with 2-1/2-foot soft surface shoulders on both sides which are appropriate for walking, strolling, bicycling and in-line skating. Materials selected for calculating the budget estimates are for standard materials that fulfill the functional requirements of the design. If different construction materials are selected during design development then this selection of unique materials may alter the budget estimates.



DEVELOPMENT CHALLENGE

CITY OF SANTA CLARA REACH 1 - HIGHWAY 237 TO AGNEW ROAD CONSTRUCTION BUDGET ESTIMATE

	Item Costs	Subtotal
Highway 237 Ramp and Underpass (700 feet)	\$ 795,000	
Old Mountain View-Alviso Road Ramps and Underpass (160 feet)	\$ 185,000	
Great America Parkway Ramps and Underpass (365 feet)	\$ 400,000	
Convention Center/Golf Cart Bridge At-Grade Crossing - Existing	—	
Tasman Drive Ramps and Underpass (375 feet)	\$ 480,000	
Great America Overflow Parking Bridge At-Grade Crossing - Existing	—	
Paving (7900 feet)	\$ 550,000	\$ 2,410,000
Agnew Road 3-Way Stop with Median Island and Fencing (100 feet)	\$ 100,000	
Ramp from Levee to Street Elevation (200 feet)	\$ 50,000	
		\$ 150,000
Hetch-Hetchy Spur Trail (2080 feet)	\$ 145,000	
City of Santa Clara Storm Water Pond Spur Trail (2810 feet)	\$ 140,000	
		\$ 285,000
 TOTAL BUDGET		\$ 2,845,000
Mitigation @ 10%		\$ 285,000
Amenities @ 5%		\$ 142,000
SUBTOTAL		\$ 3,272,000
Contingency @ 20%		\$ 654,000
GRAND TOTAL		\$ 3,926,000

Figure 42 - Reach 1 - Highway 237 to Agnew Road Construction Budget Estimate



CITY OF SANTA CLARA
REACH 2 - AGNEW ROAD TO SCOTT BOULEVARD
CONSTRUCTION BUDGET ESTIMATE

	Item Cost	Subtotal
Mission College Underpass (435 feet)	\$ 615,000	
Highway 101 Underpass (700 feet)	\$ 945,000	
Scott Boulevard Underpass (400 feet)	\$ 525,000	
Paving (2400 feet)	\$ 165,000	
		\$ 2,250,000
 TOTAL BUDGET		\$ 2,250,000
Mitigation @ 10%		\$ 225,000
Amenities @ 5%		\$ 113,000
SUBTOTAL		\$ 2,588,000
Contingency @ 20%		\$ 518,000
GRAND TOTAL		\$ 3,106,000

Figure 43 - Reach 2 - Agnew Road to Scott Boulevard Construction Budget Estimate



DEVELOPMENT CHALLENGE

CITY OF SANTA CLARA

REACH 3 - SCOTT BOULEVARD TO MONROE STREET

CONSTRUCTION BUDGET ESTIMATE

	Item Costs	Subtotal
Central Expressway Underpass (545 feet)	\$ 790,000	
Walsh Ave. Underpass (392 feet)	\$ 545,000	
CalTrain Bore & Jack Tunnel (276 feet) *	\$ 995,000	
Monroe Cut & Cover Tunnel (200 feet)	\$ 1,390,000	
Staging Area Ped. Bridge from West to East Bank (75 Feet)	\$ 100,000	
Trail Staging Area - Parking, Restrooms, Amenities (280 feet of Trail) **	\$ 250,000	
Paving (4100 feet)	\$ 290,000	
		\$ 4,360,000
 TOTAL BUDGET		\$ 4,360,000
Mitigation @ 10%		\$ 436,000
Amenities @ 5%		\$ 218,000
SUBTOTAL		\$ 5,014,000
Contingency @ 20%		\$ 1,002,000
GRAND TOTAL		\$ 6,016,000

* In-Channel Cantilevered Underpass Potentially Feasible through Modification of Flood Control Wall. This design would reduce cost by approx. \$500,000. This design must be reviewed by the Santa Clara Valley Water District.

** Staging Area would require a portion of the County of Santa Clara Roads and Airports Department property located at the corner of Monroe Street and San Tomas Expressway.

Figure 44 - Reach 3 - Scott Boulevard to Monroe Street Construction Budget Estimate



CITY OF SANTA CLARA
REACH 4 - MONROE STREET TO PRUNERIDGE AVENUE
CONSTRUCTION BUDGET ESTIMATE

	Item Costs	Subtotal Costs
Class I Trail parallel to San Tomas Expressway	\$ 90,000	
Paving (1320 feet)	\$ 15,000	
Fencing (1320 feet)	\$ 10,000	
Tree Removal	\$ 10,000	\$ 125,000
Street Improvements/Sign Package (6 intersections)	\$ 480,000	
		\$ 480,000
Youth Center Spur Trail (1890 feet)	\$ 95,000	
Bowers Park Spur Trail (970 feet)	\$ 50,000	
Homeridge Park Spur Trail (780 feet)	\$ 40,000	
		\$ 185,000
TOTAL BUDGET		\$ 790,000
Mitigation @ 10%		\$ 79,000
Amenities @ 5%		\$ 40,000
SUBTOTAL		\$ 909,000
Contingency @ 20%		\$ 182,000
GRAND TOTAL		\$ 1,091,000

Note: Street Improvements/Sign Package applied as a unit cost of \$80,000/intersection.

Figure 45 - Reach 4 - Monroe Street to Pruneridge Avenue Construction Budget Estimate



DEVELOPMENT CHALLENGE

CITY OF CUPERTINO AND CITY OF SAN JOSE REACH 5 - PRUNERIDGE AVENUE TO BOLLINGER ROAD CONSTRUCTION BUDGET ESTIMATE

	Item Costs	Subtotal
Improvements to San Jose Water Company Property *	\$ 250,000	
Ped. Bridge to East Bank from San Jose Water Co. Parcel (70 feet) *	\$ 150,000	
Street Improvements/Sign Package (3 Intersections)	\$ 240,000	
Paving - East Bank (2300 feet)	\$ 160,000	\$ 800,000
Spur Trail to Hewlett-Packard **		
Highway 280 Off-Ramp Underpass	\$ 250,000	
Ped. Bridge to North of Highway 280 (70 feet)	\$ 130,000	
Paving - East Bank (2900 feet)	\$ 200,000	\$ 580,000
TOTAL BUDGET		\$ 1,380,000
Mitigation @ 10%		\$ 140,000
Amenities @ 5%		\$ 70,000
SUBTOTAL		\$ 1,590,000
Contingency @ 20%		\$ 318,000
GRAND TOTAL		\$ 1,908,000

Note: Street Improvements/Sign Package applied as a unit cost of \$80,000/intersection.

* Pedestrian Bridge would require access through San Jose Water Company Parcel.

** Spur Trail would require access through County of Santa Clara Roads and Airports
Department property off Lawrence Expressway and Caltrans ROW behind
5300 Stevens Creek Boulevard.

Figure 46 - Reach 5 - Pruneridge Avenue to Bollinger Road Construction Budget Estimate

**CITY OF SAN JOSE****REACH 6 - BOLLINGER ROAD TO PROSPECT ROAD****CONSTRUCTION BUDGET ESTIMATE**

	Item Costs	Subtotal
Pedestrian Bridge at Murdock Park (30 feet)	\$ 150,000	
Paving (3000 feet)	\$ 210,000	
Fencing (2900 feet)	\$ 30,000	
Remove/Relocate Soundwall (1800 feet)	\$ 140,000	
Top-of-Bank Widening to 15 Feet - Sites #1, 2, 3 and 5	\$ 94,000	\$ 474,000
English Drive Spur Trail (1700 feet)	\$ 85,000	
Neighborhood Access Improvements at English Drive	\$ 125,000	
Grading adjacent to Bend in Channel - Site #4 (100 feet)	\$ 100,000	\$ 310,000
TOTAL BUDGET		\$ 784,000
Mitigation @ 10%		\$ 78,000
Amenities @ 5%		\$ 39,000
SUBTOTAL		\$ 901,000
Contingency @ 20%		\$ 180,000
GRAND TOTAL		\$ 1,081,000

Figure 47 - Reach 6 - Bollinger Road to Prospect Road Construction Budget Estimate



DEVELOPMENT CHALLENGE

LAND ACQUISITION

This budget estimate for the San Tomas Aquino/Saratoga Creek Trail includes design fees, construction, habitat mitigation and trail amenities. The estimate does not include the cost for acquiring land or easements. The majority of the land along the creek is in public ownership. The Santa Clara Valley Water District is the principal owner. Santa Clara County and the cities of Santa Clara and San Jose own a significant portion of the land adjacent to the creek corridor. However, not all of the creek corridor is publicly held or necessarily held by the public agency that will develop and maintain the San Tomas Aquino/Saratoga Creek Trail. It is likely that the trail will be implemented by several agencies. Each agency that develops a portion of the trail will be required to enter into a joint use agreement with the Santa Clara Valley Water District.

There are three areas along the trail alignment where acquisition or easements of additional land is needed to construct portions of the trail. These land acquisitions or easements are discussed below and footnoted in the individual reach budget estimates. In six other areas, property leases, transfers or joint use agreements must occur between different County departments or between the cities of Santa Clara and San Jose and Santa Clara County. The nine areas which require acquisition, transfer, easements, lease options or joint use agreements are detailed below and are previously referenced in Chapter 3 in connection with the trail alignment. Many of these areas are publicly held lands. However, they are unique in that they are not

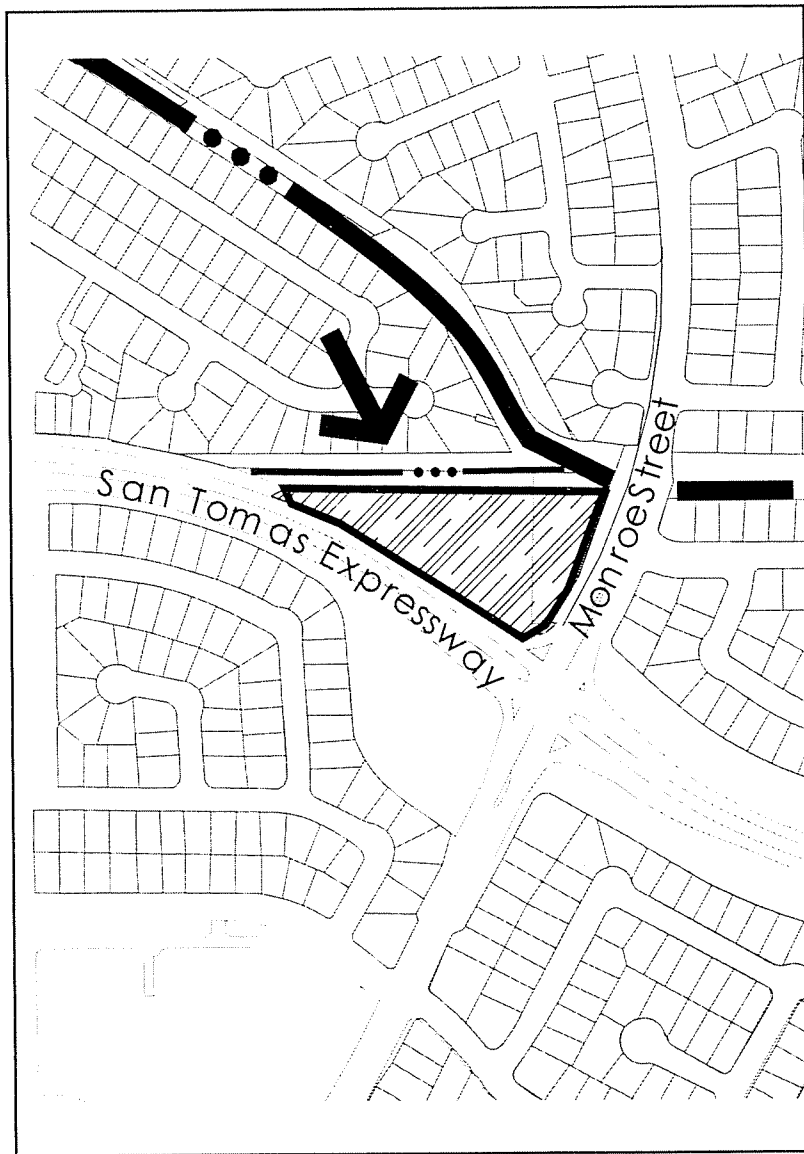
controlled by the primary land owner, the Santa Clara Valley Water District.

MONROE STAGING AREA AND TRAIL

COUNTY ROADS AND AIRPORTS DEPARTMENT PROPERTY ON MONROE STREET

Santa Clara County Roads and Airports Department controls the land on the corner of San Tomas Expressway and Monroe Street (*See Map 9*). This site is proposed as the Monroe Staging Area. The parcel is bordered by San Tomas Expressway, Monroe Street and San Tomas Aquino Creek. The confluence of San Tomas Aquino and Saratoga Creeks is situated at the southwest corner of the property.

The parcel is held by the County Roads and Airports Department for a possible future interchange at Monroe Street and San Tomas Expressway. The potential for the interchange will need further study to determine if the site is available for trail purposes. The site is needed both for the trail alignment and for the proposed Monroe Staging Area. The site is an ideal location for a staging area complete with parking, restrooms and other trail amenities. The setting of the creek confluence, its location half way along the trail and its easy access create a unique opportunity for development of the trail.



Map 9 - Trail Alignment at Monroe Staging Area

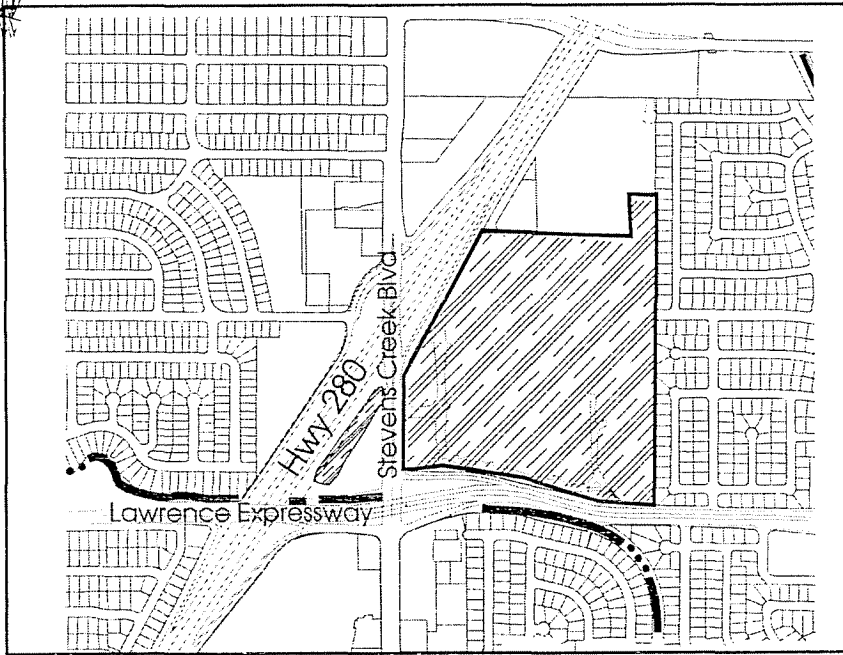
SPUR TRAIL TO HEWLETT-PACKARD COMPANY

The spur trail to Hewlett-Packard from Barnhart Avenue would cross several land uses and many property owners. Businesses and land uses in the area are discussed in order from north to south.

HEWLETT-PACKARD COMPANY SANTA CLARA DIVISION SITE

The Hewlett-Packard Company owns and operates its Santa Clara Division located on Stevens Creek Boulevard. The site is bordered by Highway 280, Lawrence Expressway, Stevens Creek Boulevard, City of Santa Clara utilities property and the Westwood Oaks neighborhood (See Map 10). The facility is accessed from Lawrence Expressway and Stevens Creek Boulevard. Plans approved by the City of Santa Clara call for the expansion of the facility from 800,000 square feet to 1,500,000 square feet and a corresponding increase in the work force from 3,000 to 5,000 employees. This expansion further demonstrates a need to provide alternative ways for employees to reach the Santa Clara Division. The spur trail extending from Barnhart Avenue to the Santa Clara Division would provide one alternative transportation opportunity.

The spur trail would require a modification of the signalized intersection at Stevens Creek Boulevard and potential pedestrian and bicycle improvements within the Hewlett-Packard campus. The location of the intersection is closely aligned with Saratoga Creek. A street crossing in front of Hewlett-Packard is the most



Map 10 - Hewlett-Packard Spur Trail Site

spur trail would facilitate bicycling and walking to work for Hewlett-Packard employees living south of Stevens Creek Boulevard.

5300 STEVENS CREEK BOULEVARD

The building at 5300 Stevens Creek Boulevard is currently occupied by Accolade. This triangular shaped property is bordered by Highway 280, Stevens Creek Boulevard and Saratoga Creek (See Map 10). The Santa Clara Valley Water District has an approximate 500 foot easement along the property adjacent to the creek. The site is accessed from Stevens Creek Boulevard and

is directly across the street from the Hewlett-Packard Company, Santa Clara Division.

The spur trail would require a connection from Stevens Creek Boulevard to the Santa Clara Valley Water District easement located on the eastern leg of the triangle. The trail would cross Stevens Creek Boulevard and extend through the parking area of 5300 Stevens Creek Boulevard before entering Highway 280 right of way held by Caltrans. The Caltrans right of way extends along the southern portion of 5300 Stevens Creek Boulevard. The trail would be aligned along the right of way from the area of the signalized intersection to Saratoga Creek. This short section of trail is needed to reconnect the alignment to the creek corridor.

SAN JOSE WATER COMPANY WELL SITE

The trail alignment proposed between Pruneridge Avenue and Barnhart Avenue would require a connection from Barnhart Avenue to Santa Clara Valley Water District property located along the east bank of Saratoga Creek (See Map 11). The San Jose Water Company Well Site includes approximately 125 feet of frontage along the creek. The Well Site is accessed from Sterling Boulevard. A bicycle/pedestrian bridge would be installed on the property to extend trail across the creek from Barnhart Avenue.



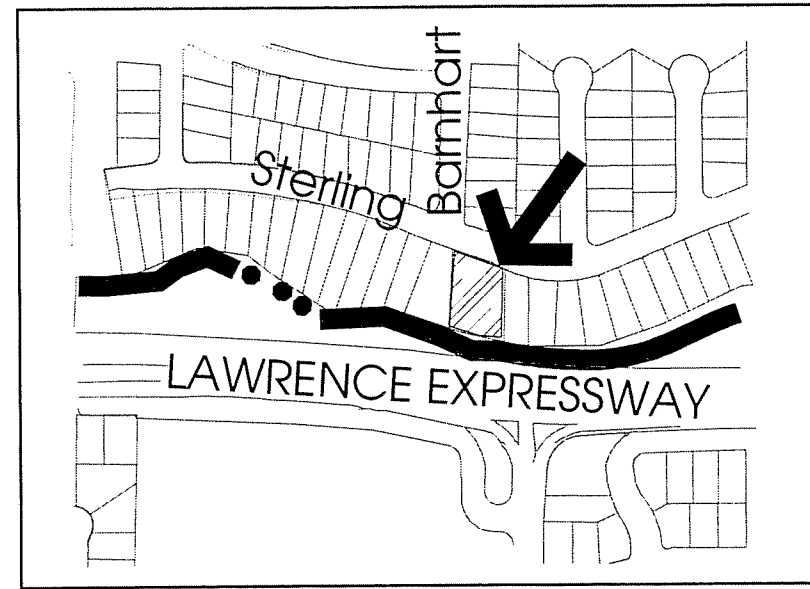
COUNTY ROADS AND AIRPORTS DEPARTMENT PROPERTY PARALLEL TO LAWRENCE EXPRESSWAY

Santa Clara County Roads and Airports Department owns the land along the east bank of Saratoga Creek from Highway 280 to the Barrington Bridge Subdivision (See Map 11). This site is currently used as a storage yard for the Maintenance Division. The site is situated along approximately 2500 feet of creek frontage. The area has been degraded over the years. Loss of riparian habitat, ingress and egress by heavy maintenance vehicles and high stream flows collectively contributed to two significant creek bank failures in the winter of 1995. These failures were repaired in the fall of 1995. Most of this site provides ideal top-of-bank for development of the trail and potential for habitat restoration. However, in the areas of the failures the creek bank is narrow and only meets the minimum top-of-bank requirements for trail development. This site is necessary if the trail alignment is to continue along the creek corridor. Restoration of the site would significantly improve the habitat value of this segment of the corridor.

TRAIL ALIGNMENT FROM BARNHART AVENUE TO MURDOCK PARK STAGING AREA

CITY OF SAN JOSE MURDOCK PARK

The final segment of the trail proposed between Barnhart Avenue and Murdock Park would extend along the east bank of the creek and exit the creek corridor at Murdock Park. In this area, the Barrington



Map 11 - San Jose Water Company Well Site and County Roads and Airports Department Property

Bridge Homeowners Association maintains an existing segment of the trail located within the subdivision off of Chelmsford Drive. This completed section of trail extends from Bollinger Road north to the end of Sterling Boulevard. The trail is currently accessed from Bollinger Road. South past Bollinger Road the trail will extend through Santa Clara Valley Water District property on the east bank of the creek.

The City of San Jose owns and operates Murdock Park located at the corner of Castle Glen Avenue and Wunderlich Drive. The parcel is situated on the west bank and includes approximately 1250 feet of frontage



DEVELOPMENT CHALLENGE

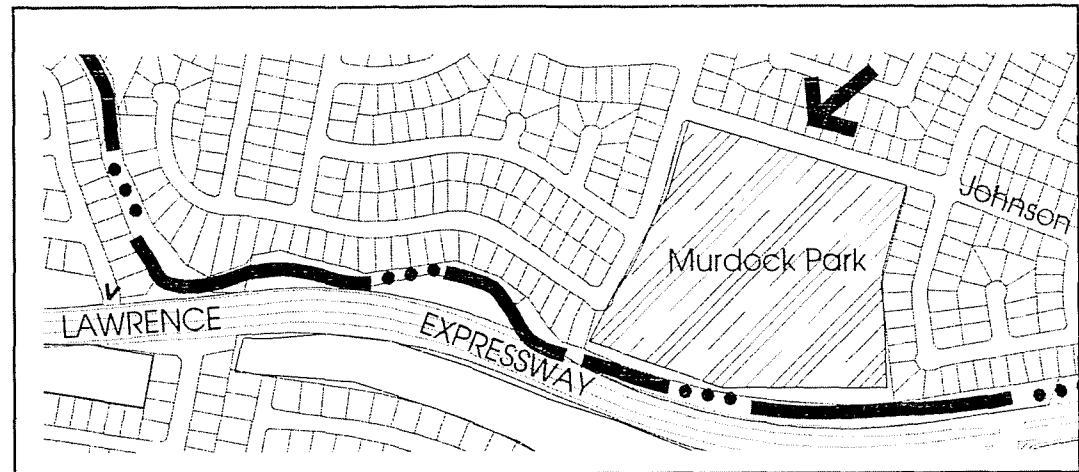
along Saratoga Creek (See Map 12). The trail alignment would require access through Murdock Park to reach Castle Glen Avenue. A new bicycle/pedestrian bridge would be installed at Murdock Park to connect the main trail alignment on the east bank of the creek with Murdock Park and city streets on the west bank.

CITY OF SAN JOSE PROPERTY AT THE END OF ENGLISH DRIVE

English Drive dead ends in a cul-de-sac that abuts the Lawrence Expressway sound wall (See Map 13). Apartment buildings and single family residences are located on opposite sides of street. Open space land extends along the east bank of the creek from Murdock Park to English Drive. This area is heavily vegetated with a remnant oak woodland and riparian forest. A pedestrian access to the creek corridor is proposed at the end of English Drive. This access is already being informally used by residents. An improved neighborhood connection would require access across the cul-de-sac to reach the open space lands on the east bank of the creek and the main trail alignment to the north.

PERMITS AND APPROVALS

The construction of the San Tomas Aquino/Saratoga Creek Trail will require numerous permits, approvals and consultations with the jurisdictional agencies. The



Map 12 - Murdock Park Staging Area Site

following list provides a summary of the permits likely to be required for each reach of the trail.

REACH 1 - CITY OF SANTA CLARA

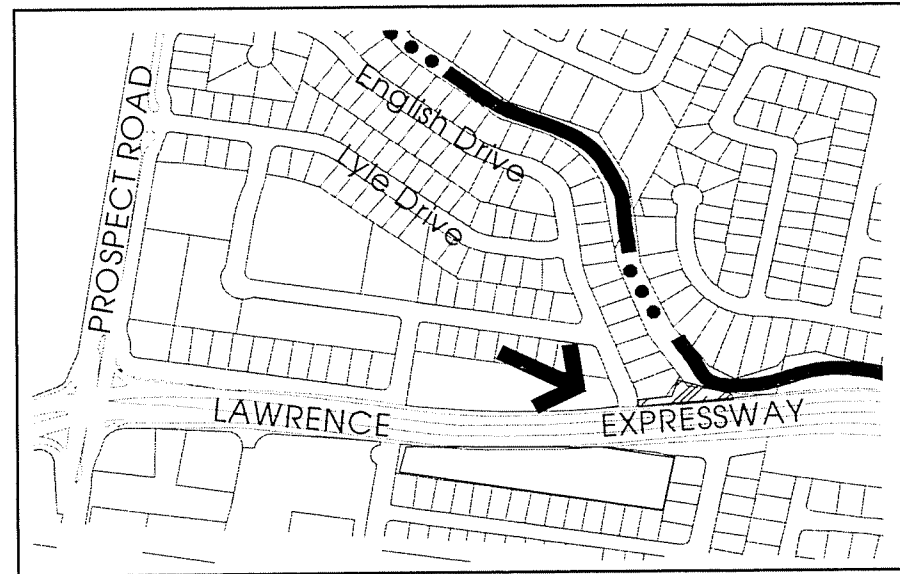
LOCAL/REGIONAL

1. San Francisco Water Department
 - a. Construction Permit
 - b. Encroachment Permit
2. Santa Clara Valley Transportation Authority (VTA)
 - a) Construction Permit
 - b) Encroachment Permit
3. Santa Clara Valley Water District
 - a) Construction and Encroachment Permit
 - b) Joint Use Agreement



STATE

1. Bay Conservation and Development Commission (BCDC)
 - a) Administrative Permit
2. California Department of Fish and Game (DFG)
 - a) Streambed Alteration Agreement
3. California Department of Transportation (Caltrans)
 - a) Construction Permit
 - b) Encroachment Permit
4. Regional Water Quality Control Board (RWQCB)
 - a) NPDES - Notice of Intent, Storm Water Pollution Prevention Plan
 - b) Section 401 Certification (coordinated with ACOE Section 404 Permit)



Map 13 - City of San Jose Property at end of English Drive

FEDERAL

1. Army Corps of Engineers
 - a) Individual Permit

CONSULTATIONS

1. Pacific Gas and Electric Company
 - a) Plan Review

REACH 2 - CITY OF SANTA CLARA

LOCAL/REGIONAL

1. Santa Clara Valley Water District
 - a) Construction and Encroachment Permit
 - b) Joint Use Agreement

STATE

1. California Department of Fish and Game (DFG)
 - a) Streambed Alteration Agreement
2. California Department of Transportation (Caltrans)
 - a) Construction Permit
 - b) Encroachment Permit
3. Regional Water Quality Control Board (RWQCB)
 - a) NPDES - Notice of Intent, Storm Water Pollution Prevention Plan
 - b) Section 401 Certification (coordinated with ACOE Section 404 Permit)

FEDERAL

1. Army Corps of Engineers
 - a) Individual Permit



DEVELOPMENT CHALLENGE

CONSULTATIONS

1. Pacific Gas and Electric Company
 - a) Plan Review

REACH 3 - CITY OF SANTA CLARA

LOCAL/REGIONAL

1. Peninsula Corridor Joint Powers Board
 - a) Construction Permit
 - b) Encroachment Permit
2. Santa Clara County Roads and Airports Department
 - a) Plan Review
 - b) Construction Permit
3. Santa Clara Valley Water District
 - a) Construction and Encroachment Permit
 - b) Joint Use Agreement

STATE

1. California Department of Fish and Game (DFG)
 - a) Streambed Alteration Agreement
2. Public Utilities Commission
 - a) Encroachment Permit
3. Regional Water Quality Control Board (RWQCB)
 - a) NPDES - Notice of Intent, Storm Water Pollution Prevention Plan
 - b) Section 401 Certification (coordinated with ACOE Section 404 Permit)

FEDERAL

1. Army Corps of Engineers
 - a) Individual Permit

CONSULTATIONS

1. Pacific Gas and Electric Company
 - a) Plan Review

REACH 4 - CITY OF SANTA CLARA

LOCAL/REGIONAL

1. Santa Clara County Roads and Airports Department
 - a) Plan Review
 - b) Construction Permit
2. Santa Clara Valley Water District
 - a) Construction and Encroachment Permit
 - b) Joint Use Agreement

STATE

1. California Department of Fish and Game (DFG)
 - a) Streambed Alteration Agreement
2. Regional Water Quality Control Board (RWQCB)
 - a) NPDES - Notice of Intent, Storm Water Pollution Prevention Plan

CONSULTATIONS

1. Pacific Gas and Electric Company
 - a) Plan Review



REACH 5 - CITY OF CUPERTINO AND CITY OF SAN JOSE

LOCAL/REGIONAL

1. Santa Clara County Roads and Airports
Department
 - a) Plan Review
 - b) Construction Permit
2. Santa Clara Valley Water District
 - a) Construction and Encroachment Permit
 - b) Joint Use Agreement

STATE

1. California Department of Fish and Game (DFG)
 - a) Streambed Alteration Agreement
2. California Department of Transportation (Caltrans)
 - a) Construction Permit
 - b) Encroachment Permit
3. Regional Water Quality Control Board (RWQCB)
 - a) NPDES - Notice of Intent, Storm Water Pollution Prevention Plan
 - b) Section 401 Certification (coordinated with ACOE Section 404 Permit)

FEDERAL

1. Army Corps of Engineers
 - a) Individual Permit

CONSULTATIONS

1. Pacific Gas and Electric Company
 - a) Plan Review

REACH 6 - CITY OF SAN JOSE

LOCAL/REGIONAL

1. San Jose Water Company
 - a) Construction Permit
 - b) Encroachment Permit
2. Santa Clara County Roads and Airports
Department
 - a) Plan Review
 - b) Construction Permit
3. Santa Clara Valley Water District
 - a) Construction and Encroachment Permit
 - b) Joint Use Agreement

STATE

1. California Department of Fish and Game (DFG)
 - a) Streambed Alteration Agreement
2. Regional Water Quality Control Board (RWQCB)
 - a) NPDES - Notice of Intent, Storm Water Pollution Prevention Plan

CONSULTATIONS

1. Pacific Gas and Electric Company
 - a) Plan Review

BIBLIOGRAPHY

San Tomas Aquino / Saratoga Creek Trail Master Plan 1998





Access Compliance Office of Regulation Services, California Accessibility Reference Manual, Book 1 - California Accessibility Statutes and Book 2 - California Accessibility Regulations complies with the Americans with Disability Act, May 1994.

Association of Bay Area Governments, Bay Trail Plan, 1989.

Bay Area Air Quality Management District, BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans, April 1996.

Cupertino, City of. General Plan, 1997.

Cupertino, City of. Bicycle Master Plan, 1998.

Caltrans, Highway Design Manual: Chapter 1000 Bikeway Planning and Design, January 1987.

Einarson, Fowler & Watson, San Tomas Aquino Creek Trail Flood Study Results, May 14, 1998.

Habitat Restoration Group and Jones and Stokes Associates, City of San Jose Riparian Corridor Policy Study, 1994.

Holland, Robert F., Preliminary Description of the Terrestrial Natural Communities of California, State of California, Department of Fish and Game, October 1986.

San Jose, City of. Transportation Bicycle Plan, 1992.

Santa Clara, City of. Bicycle Map, 1997.

Santa Clara, City of. General Plan, 1990.

Santa Clara, City of. Transportation Demand Management Survey - Summary of Santa Clara Businesses, 1991.

Santa Clara County. Bicycle Plan, March 1994.



BIBLIOGRAPHY

Santa Clara County, Trails Master Plan, July 1995.

Santa Clara County, Countywide Trails Master Plan Update Draft Environmental Impact Report, July 1995.

Santa Clara County, Santa Clara County's Trail Easement Dedication Policies and Practices, January 1992.

Santa Clara Valley Transportation Authority. Bikeways Map, 1997.

Santa Clara Valley Transportation Authority. Bus & Rail Map, 1997.

Santa Clara Valley Transportation Authority. Light Rail - Great America to Santa Teresa & Almaden, 1998.

Santa Clara Valley Water District, Engineer's Report San Tomas Creek Planning Study, Route 237 to Highway 101, August 1995.

Santa Clara Valley Water District, San Tomas Aquino/Saratoga Creek Planning Study Summary Report, 1981.

Santa Clara Valley Water District, San Tomas Aquino Creek Planning Study: Final Engineer's Report, 1978.

Santa Clara Valley Water District, San Tomas Aquino Creek Planning Study: Williams Road to the Saratoga Creek Confluence, October 1980

Santa Clara Valley Water District, Saratoga Creek Planning Study: San Tomas Aquino Creek to Lawrence Expressway, 1983.

APPENDICES

San Tomas Aquino / Saratoga Creek Trail Master Plan 1999





COUNTY OF SANTA CLARA BOARD OF SUPERVISORS RESOLUTION

Resolution of the Board of Supervisors of the County of Santa Clara to Approve Establishing San Tomas Aquino/Saratoga Creek Streamside Park Committee, A Multi-Jurisdictional Ad Hoc Citizens Committee to Advise on the Potential for Future Preservation and Development of San Tomas Aquino Creek and Saratoga Creek

WHEREAS, the San Tomas Aquino Creek traverses and joins together areas including portions of the City of San Jose, the City of Santa Clara, and various unincorporated areas of the County of Santa Clara until it joins with the Saratoga Creek and proceeds to the Bay Slough above Highway 237; and

WHEREAS, the Saratoga Creek traverses and joins together areas including portions of the City of San Jose, the City of Santa Clara, and various unincorporated areas of the County of Santa Clara, including several city parks such as Central Park, Maywood Park, Homeridge and Bowers in accordance with the City of Santa Clara Master Plan of 1959; and

WHEREAS, the Saratoga Creek is shown on the regional park, trails and scenic highways element of the County General Plan adopted by the Board of Supervisors in November, 1981; and

WHEREAS, a study of the potential for further preservation, recreational and aesthetic development is evidenced by the Santa Clara Nature and

Educational Trail Committee Report for the Santa Clara Parks and Recreation Commission dated March 17, 1992, adopted by the Santa Clara City Council March 31, 1992, expressing interest in the preservation and development of a Creekside Trail north of Highway 101; and

WHEREAS, this project is located in the proximity of Maywood, Sutter, Milliken and Bowers Schools, The Santa Clara Unified School District has an interest in creating an ecology walk and wilderness trail to better educate our youth about their environment; and

WHEREAS, there are prior examples of joint efforts which have been formally and successfully undertaken for the cooperative aesthetic and recreational development of certain portions of Los Gatos Creek by the County of Santa Clara, the City of Campbell, the Town of Los Gatos and the Santa Clara Valley Water District which demonstrate the feasibility of such a citizens committee, as well as illustrate the significant public recreational benefits which such trails can provide; and

WHEREAS, a study by the Multi-Jurisdictional Ad Hoc Citizens Committee of the Creekside areas will be in the public interest and is deemed necessary to ensure continuity of a trail system, including paved bike paths.

NOW, THEREFORE, BE IT RESOLVED that a Multi-Jurisdictional Ad Hoc Citizens Committee, consisting of fifteen (15) members be established to study the various opportunities for preservation and development of the San Tomas Aquino/Saratoga Creeks, and to make recommendations to the County Board of Supervisors



APPENDIX 1

and other public entities (working in conjunction with private developers) to realize a linear park concept, participating in the project for the purpose of implementing the Committee'' objectives. The Committee shall receive staff assistance from the Santa Clara County Parks and Recreation Department and the cities participating in the project and the Santa Clara Valley Water District.

BE IT FURTHER RESOLVED that the membership of this Advisory Committee be comprised of fifteen (15) persons selected as follows:

- (4) members designated by those local neighborhood and industry associations, which are affected by virtue of their close proximity to the San Tomas Aquino/Saratoga Creek project;
- (1) member designated by the Trail Master Plan Advisory Committee for the County of Santa Clara;
- (2) members from the City of Santa Clara, nominated by the City Council;
- (1) member from the City of San Jose, nominated by the City Council;
- (1) member from the Santa Clara Valley Water District, nominated by the Board of Directors;
- (1) member from the Santa Clara Unified School District, nominated by the Santa Clara Unified School District;
- (5) members nominated by the County Board of Supervisors.

BE IT FURTHER RESOLVED that this Multi-Jurisdictional Ad Hoc Citizens Committee shall remain in effect until completion of construction of the trail from the boundary between the City of Saratoga and the City of San Jose, near the intersection of Prospect Avenue Lawrence Expressway to the Bay Slough above Highway 237.

PASSED AND ADOPTED by the Santa Clara County Board of Supervisors, State of California, on February 23, 1993 by the following vote:

AYES: Supervisors Diridon, Gonzales, Honda, Lofgren and McKenna

NOES: Supervisors None

ABSENT: Supervisors None



AGENCIES CONTACTED DURING MASTER PLAN

Board of Supervisors

Jim Beall, District 4
 Sean Charpentier, Aide to Jim Beall
 Metta Cuffel, Aide to Jim Beall
 Sequia Hall, Aide to Jim Beall

Cleary Consultants, Inc.

Steven Penshorn, P.E., Project Engineer

Campbell Unified High School District

Agnes Valdez, Superintendent

Cotton, Shires and Associates

Ted Sayre, Supervising Engineering Geologist

City of Cupertino

Raymond Chong, Traffic Engineer
 Stephen Dowling, Parks and Recreation Director

Einarson, Fowler & Watson

Mark Minkowski, P.E., Senior Engineer

Hewlett-Packard Company

Bernard Baker, Facilities Manager
 Santa Clara Site

Intel Corporation

Cynthia James
 Government Affairs Manager

City of Santa Clara

Chris Fernandez, P.E., Traffic Engineer
 Nick Lozano, Traffic Engineer
 Kevin Riley, A.I.C.P., Principal Planner
 Larry Wolfe, Parks and Recreation Director
 Rich Yee, Civil Engineer II

City of San Jose

Jo-Ann Collins, City Bicycle Coordinator
 Trixie Johnson, Councilmember
 Carla Ruigh, Parks Manager
 Joel Savit, Planner 2

San Jose Water Company

William H. Moore, Property Manager

Santa Clara Valley Water District

Scott Katric, Associate Civil Engineer
 Sue Tippetts, P.E., Supervising Engineer

County of Santa Clara, Office of Planning

Don Weden, Senior Planner

County of Santa Clara

Parks and Recreation Department

Lisa Killough, Regional Park Planner
 Alan LaFleur, Deputy Director
 Paul Romero, Director
 Ruth Shriber, Park Planner

County of Santa Clara

Roads and Airports Department

Michael Murdter, P.E., Director
 Bob VanEtten, P.E., Senior Civil Engineer

Silicon Valley Bicycle Coalition

Jim Stallman

Thomas Reid Associates

Janet Cochrane, Project Manager
 Thomas Reid, Principal



APPENDIX 2

AGENCIES CONTACTED DURING FEASIBILITY STUDY

Caltrans- District 4, Design, Santa Clara A

Lawrence Jones, Transportation Engineer
Don Reidt, Senior Engineer
Mike Welsh, Chief

Hewlett-Packard Company

Marcel Cohen-Hadria
Bay Area Real Estate

Jerry Garrett, Facilities Manager
Santa Clara Site

Peninsula Corridor Joint Powers Board

Tom Davids, Property Manager

City of Santa Clara

Mike Keller, Division Manager
Electrical Department
Robert Mortenson
Public Works Director

County of Santa Clara

Roads and Airports Department

Hiro Akbarzadeh
Senior Civil Engineer
Bill Lee, Associates Civil Engineer
Victor Pshevlozky
Associate Civil Engineer

Santa Clara Valley Water District

Deborah Amshoff
Environmental Specialist
Marc Klemencic, Group Manager

San Jose Water Company

William H. Moore, Property Manager



MAP LEGEND

Features of the Trail

- San Tomas Aquino / Saratoga Creeks
- Trail Alignment
- Winter Trail Alignment
- Existing Spur Trails
- Proposed Spur Trails
- Underpasses and Ramps
- Tunnels
- Staging Areas
- Access Points
- Proposed Pedestrian Bridges
- Existing Pedestrian Bridges

On-Street Bicycle System

- Bike Lanes
- Bike Routes
- Undesignated Routes

Regional Transit System

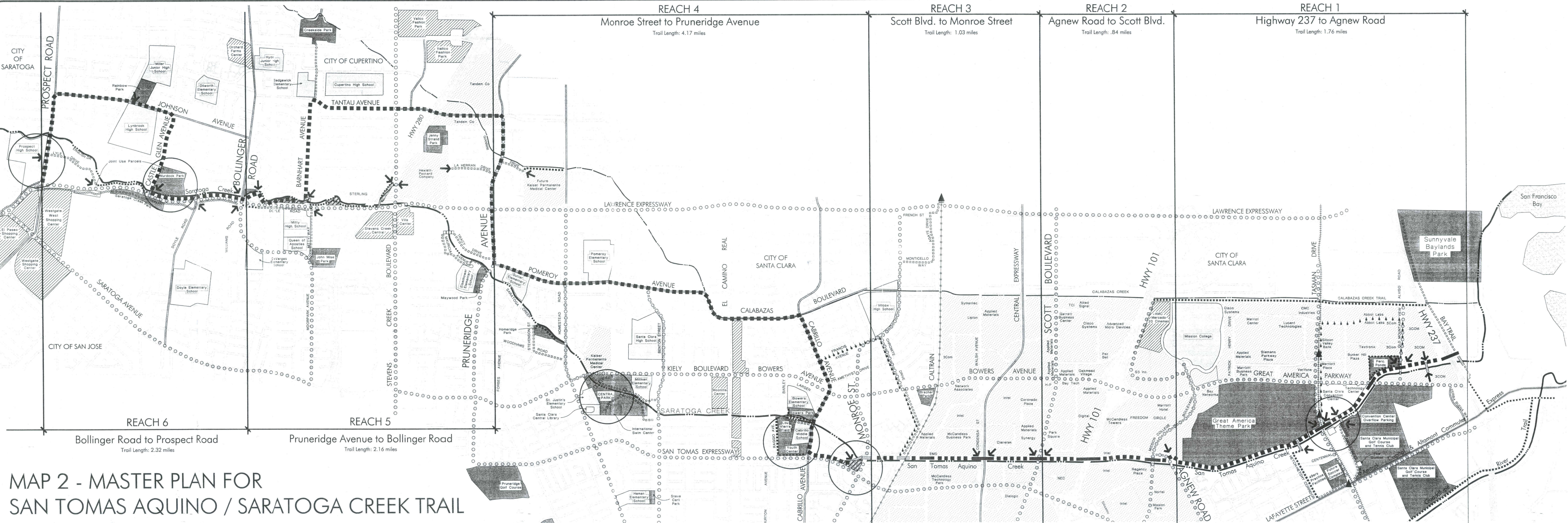
- Amtrak - Capitol & Altamont Lines
- Light Rail
- CalTrain
- Station

Land Uses

- Employment Centers
- Retail Districts
- Educational Campuses
- Recreation Facilities

Acquisition/Easement Opportunities

- Joint Use Parcels



MAP LEGEND

Features of the Trail

- Trail Alignment
- Winter Trail Alignment
- Existing Spur Trails
- Proposed Spur Trails
- Underpasses and Ramps
- Tunnels
- Staging Areas
- Access Points
- Proposed Pedestrian Bridges
- Existing Pedestrian Bridges

On-Street Bicycle System

- Bike Lanes
- Bike Routes
- Undesignated Routes

Regional Transit System

- Amtrak - Capitol & Altamont Lines
- Light Rail
- CalTrain Station

Land Uses

- Employment Centers
- Retail Districts
- Educational Campuses
- Recreation Facilities

Acquisition and Easement Opportunities

- Joint Use Parcels

PREPARED BY:
SOKALE/LANDRY COLLABORATIVE

PREPARED FOR:
COUNTY OF SANTA CLARA
PARKS & RECREATION DEPARTMENT
SAN TOMAS AQUINO/SARATOGA CREEK
STREAMSIDE PARK COMMITTEE

MAY 2005, 2007, 2008

0 500 1000 1500 2000

MAP 2 - MASTER PLAN FOR
SAN TOMAS AQUINO / SARATOGA CREEK TRAIL